

# REPORT

OF THE

PROCEEDINGS OF THE SANATORY COMMITTEE

OF THE

## BOARD OF HEALTH,

IN RELATION TO THE

# CHOLERA,

AS IT PREVAILED IN NEW YORK IN 1849

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## Members of the Sanatory Committee.



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## REPORT.

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THE CHOLERA having finally left our city, the Sanatory Committee in bringing their labors to a close, deem it their duty to make a full report of their proceedings to the Board of Health, by whom they were appointed, and whose views and wishes they have endeavored to fulfill according to the best of their ability. The Committee consider such a report to be necessary, not merely as a record for future reference, but as a justification of some of the measures which they have felt themselves obliged to take in opposition to the remonstrances of many of their most respected and valued fellow-citizens. In making their report, it is not their intention to enter into discussions in relation to the nature, causes, or the modes of treating the epidemic which has recently afflicted our city. These are subjects not within their province, and they shall leave them where

they properly belong, to the medical profession, feeling assured that if the members of that profession acknowledge themselves embarrassed by numerous problems connected with this mysterious disease, it is hardly to be expected that a body of laymen can enter the field of controversy with profit to themselves or advantage to the public. Their design is simply to give an account of the various measures which they adopted with the view of guarding the public health, and of protecting, as far as lay in their power, the interests of our great metropolis.

The Sanatory Committee were appointed by the Board of Health on the 16th day of May, 1849, and were invested with the full powers of the Board. Feeling the great responsibility resting upon them, and knowing that many questions would have to be decided by them involving medical facts and principles, their first business was to associate with them a medical counsel, for the purposes of advice and consultation. Three gentlemen of high standing, and in whom the profession and the public reposed full confidence,

were accordingly selected, and these, together with the Resident Physician and Health Commissioner, have acted as the medical advisers of the Committee during the whole prevalence of the epidemic.

The first case of cholera was announced on the 14th of May, and as this and several of the succeeding cases occurred at the "Five Points," a locality pre-eminent for its filth, vice and destitution, and where appeared to exist every requisite for the spread of the disease, it became evident at once, that some public place should be immediately provided, to which the sick might be removed, with the view not merely of separating them from the offensive and foul region in which they were lying, but to give them the best possible chance of recovery. A small two story house, No. 127 Anthony street, was accordingly taken at once as a temporary hospital, and Dr. WILLIAM P. BUEL appointed as the physician to take charge of it. To this place seven patients were carried. As it was apparent that should the cases of cholera increase, a larger and permanent hospital would



be required, the question at once presented itself where shall this hospital be located? Shall it be in the city, and in the neighborhood where the cases are at present occurring, or shall it be remote from the city, and so far secluded as to prevent any communication with the neighboring population? As the decision of this question depended entirely upon that of another question, i. e. the contagious or non-contagious character of the disease, it may readily be conceived that the Committee felt themselves not a little embarrassed. They found that medical men of the highest eminence differed on this subject, and that not merely theoretical opinions, but facts were arrayed in favor of the opposing doctrines. After obtaining all the light they possibly could from the testimony of medical men both at home and abroad, on mature consideration, they came to the conclusion that however certain isolated facts seemed to favor the doctrine of contagion, yet as a general rule, the disease did not appear to be propagated in this way—that the cause of it appeared to exist in the atmosphere, and that its spread was entirely independent of any communi-



cation between the well and the sick. The Committee confess that they were happy to come to this conclusion; it relieved them from the difficulties attending a selection of hospitals at a distance—it obviated the inconvenience and danger (sometimes fatal) of a long transportation of the sick—while it enabled the Committee to make more efficient provisions for the comfort and treatment of those attacked with the disease. Having come to this decision, a large three story building, called “MONROE HALL,” at the corner of Pearl and Centre streets, was immediately secured, and possession taken on the 18th day of May. This building was in the neighborhood of the “Five Points,” but combined the advantages of air and elevation. The two upper stories consisted of large halls, well calculated for the wards of a hospital. This building has since been known as the “CENTRE STREET HOSPITAL.” To this hospital, all the patients were immediately transferred from the temporary house in Anthony street, and the whole placed under the care of Dr. BUEL.

On the 21st day of May, the Sanatory Commit-

tee in company with his Honor the Mayor and the Medical Counsel, made a personal visit to the "Five Points," with the view of satisfying themselves more completely in relation to the condition of this part of the city. It is not the intention of the Committee to describe what they witnessed. To be appreciated, the place must be seen. Suffice it to say, that the exhibition of human degradation and wretchedness which presented itself was truly appalling. To those of the Committee who visited this place for the first time, it seemed almost impossible that such a state of things could exist in any portion of our city. In addition to what had been done previously, renewed orders were now given, and efficient measures adopted to cleanse the place.—The truth, however, cannot be concealed—the place itself is incapable of proper purification—and will continue to remain so until it is razed to the ground, filled up and suitably rebuilt.—To accomplish this, will require Herculean energy; our city, however, is equal to any thing, and the Committee do not know of any object

to which its united interest and philanthropy could more legitimately and advantageously be directed.

As it now seemed evident that we were about to be visited by a severe and long continued assault of the epidemic, the Committee felt it to be their duty at once to enter upon the consideration of those general measures which might be deemed necessary to meet, in the best possible manner, the impending danger. In doing this, they found several important facts, which appeared to be well established, and which might serve as guides in their operations. These facts are the following :

1st—That the general cause of the disease appears to exist in the atmosphere.

2d—That in attacking individuals, the disease generally gives notice of its approach by some preliminary symptoms.

3d—That these preliminary symptoms are usually under the control of medicine, and being arrested, the further development of the disease is prevented.

4th—That the agency of various exciting causes is generally necessary to develop the disease. Among these causes the principal are the existence of filth and imperfect ventilation, irregularities and imprudencies in the mode of living, and mental disturbance.

With these facts in view, the duties of the Committee were obvious, and they conceived them to be the following :

In the first place, to provide public hospitals for the reception and treatment of those actually attacked with the disease, and who, from poverty or other causes, might be deprived of the means of being attended to properly, at their own homes.

In the second place, to adopt such measures as might counteract the development and extension of the disease by obviating, as far as possible, all the exciting causes of it, and also, by prompt medical assistance arresting the disease in its preliminary stages.

With these objects and purposes in view, the Committee commenced and continued their labors throughout the whole course of the cholera. They established hospitals in such succession and in such parts of the city, as the spreading of the disease required, until the whole number amounted to five. They commenced and accomplished a thorough purification of the city, such a one as the city probably never had before. Through repeated publications from the Medical Counsel, they kept their fellow citizens constantly alive to the important fact that the progress of the disease depended, in a great measure, upon their own discretion in their modes of living. They endeavored to inspire them with moral courage, as one of the best preservatives against disease—and finally, they supplied the city with such an abundance of medical attendance as that every person might have the benefits of immediate advice and attention.

Such in a very few words, is a sketch of the general plan of operations pursued by the Committee, and with which, on reflection, since the



cholera has passed by, they have every reason to be satisfied. With the details entering into the carrying out of this plan, it is unnecessary to trouble the Board. There are some points, however, which the Committee deem of sufficient consequence to notice, and may be of practical importance hereafter, should the cholera again unfortunately assail our metropolis.

On the 24th day of May, the following address, prepared by the Medical Counsel, was ordered to be published in all the city newspapers, and a suitable number in pamphlet form, for distribution :

NEW YORK, MAY 24, 1849.

The undersigned having been requested by the Sanatory Committee of the Board of Health, to prepare a communication to the public, in relation to the cholera, respectfully

#### REPORT:

That as yet, only a few cases of the disease have occurred, and from the peculiar locality where they have appeared,\* amid destitution, filth and intemperance, the hope is cherished that under the protection of a kind Providence, this city may yet be preserved from its ravages. It is evident, however, that the cause

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\* The Five Points and its vicinity.

of the disease is among us, and it therefore becomes a duty to adopt all such precautionary measures as may tend to mitigate its evils, should it unfortunately become epidemic. Under this impression, they beg leave to make the following suggestions :

As the whole history of the cholera shows that its diffusion is promoted by all those causes which have a tendency to render the air impure, the first and most important concern relates to the cleanliness of the city. To accomplish this, the undersigned are satisfied that the Board of Health are taking such measures, and will continue to do so, as they trust will be efficient. The Board of Health, however, it is evident, cannot do every thing, and the Committee would respectfully call upon their fellow citizens to co-operate with them, in every possible way in their power. Sources of filth and impurity may exist without the knowledge of the public authorities, and every citizen should feel the necessity of keeping a watchful supervision over his own premises, and when individual efforts are inadequate, to call upon the Board for aid and assistance.

Believing that much may be done in the way of prevention, if not cure, of the disease, in case it should unfortunately extend among us, the undersigned would offer a few suggestions of a general nature, founded on experience, leaving the application of them to the good sense and discretion of the community at large.

In the first place, they would advise particular attention to clothing. From the nature of the complaint, it is evident that much depends upon keeping the body protected from sudden alterations of temperature and moisture. Flannel next the skin should be a universal article of apparel, and they would respectfully suggest to those charitable associations which are in the habit of supplying the poor with clothing, to make this an object of special attention.



In the second place, the diet should be particularly attended to. The undersigned would not recommend any sudden or great change in the ordinary modes of living, where those modes are temperate, and have been found to agree. Such changes, they believe, would do more harm than good. From the peculiar nature of the disease, however, it is well known that certain kinds of foods are injurious, and, without going into particulars, they would merely state that all such articles as have a tendency to relax the bowels, ought to be avoided. All crude and raw vegetables, unripe fruit, as well as violent purgative medicines, are calculated to do mischief. Excesses, either in eating or drinking, cannot be too religiously abstained from.

In the third place, attention to personal cleanliness, by the frequent use of the tepid bath, is particularly recommended.

In the fourth place, the preservation of a calm and composed state of mind is all important, and may do more than is generally supposed in preventing the onset of this disease. It is the result of experience that all epidemics are aggravated more or less by mental disturbance, whether in the shape of active panic or low despondency. To the cholera this is particularly applicable. While our citizens, therefore, use every prudential and precautionary measure, let them keep a good heart and dispel all fear.

In the fifth place, with regard to the treatment of cholera, it may be observed that, as a general rule, the disease does not attack so suddenly as to preclude the possibility of calling in medical assistance. A relaxed state of the bowels for a longer or shorter period, gives notice of its approach. In all cases, therefore, when any disorder of this kind exists, common prudence will suggest the necessity of resorting to medical aid. If this be done in season, the disease may generally be promptly arrested. When professional aid cannot be immediately obtained, and

where simple relaxation exists, twenty or twenty-five drops of laudanum may be taken ; to be repeated in one or two hours, according to circumstances. For young persons and children, the dose must be reduced, according to the age—at the age say of ten years, eight drops ; at the age of two or three years, two or three drops.

Where the symptoms are more severe, and the patient is cold, in addition to the laudanum, he should be put immediately to bed, between blankets, and every appliance in the shape of bottles of hot water, bags of hot salt or sand, frictions, &c., be diligently resorted to. A strong mustard poultice, too, should be applied over the region of the stomach, to remain on till it produces smarting of the skin. In addition to this, a little brandy and water should be given, with a view of restoring warmth. As in this city no difficulty in obtaining the speedy assistance of a physician can exist, any directions in relation to the after treatment are deemed unnecessary.

JOHN B. BECK, M. D.,	} <i>Medical Counsel.</i>
JOSEPH M. SMITH, M. D.,	
SAMUEL W. MOORE, M. D.,	

SETH GEER, M. D., *Resident Physician.*

RICHARD L. MORRIS, M. D., *Health Commissioner.*

At the same time the following hand-bill was prepared and directed to be distributed throughout the city, and posted up in all public places :

NOTICE.—Preventives of Cholera, published by order of the Sanatory Committee, under the sanction of the Medical Counsel.

Be temperate in eating and drinking. Avoid raw vegetables and unripe fruit. Abstain from cold water, when heated, and

above all from ardent spirits, and if habit have rendered them indispensable, take much less than usual. Sleep and clothe warm. Do not sleep or sit in a draught of air. Avoid getting wet. Attend immediately to all disorders of the bowels. Take no medicine without advice. Medicine and medical advice can be had by the poor, at all hours of the day and night, by applying at the Station House in each Ward.

CALEB S. WOODHULL, *Mayor*.

JAMES KELLY, *Chairman of Sanatory Committee*.

As it soon became evident that should the cholera continue to increase, a number of hospitals would be required in different parts of the city, a sub-committee was appointed to report on the subject. After a laborious investigation, the following was presented :

The Committee on Hospitals, to whom it properly belongs to recommend suitable buildings to be used as cholera hospitals, and to whom was referred a resolution passed by the Board of Education at its last meeting, which resolution reads as follows :

“ *Resolved*, That this Board respectfully remonstrate against the appropriation of public school houses, by the Board of Health or other Corporation authorities, for cholera hospitals, and urge the Common Council to take prompt measures to revoke any such appropriation that may have been already made, and to give some public expression against such appropriation in future.”

Beg leave respectfully to REPORT : That they have a high respect for the honorable gentleman who proposed the resolution, as also for the very intelligent Board which unanimously adopted

the same ; that they concede the right of petition or remonstrance to the Board of Education, as they do to any and all other of their fellow citizens ; yet they are not prepared to admit that the Board of Education is the best judge as to the measures proper to be pursued by the Board of Health. From the nature of the circumstances it cannot be expected. The Board of Health consists of the Mayor, eighteen Aldermen, eighteen Assistant Aldermen, Resident Physician and Health Commissioner ; and as that number of persons was thought too large to transact the daily executive duties with efficiency which devolve on said Body, during the prevalence of an epidemic, seven persons were chosen from the two Boards, subsequently two more were chosen, to whom the whole power of the Board of Health was transferred, and which Committee are of necessity compelled to meet daily in the discharge of the responsible trusts committed to them, exercising their best judgment in adopting measures to preserve the health of a city of four hundred and fifty thousand inhabitants, among which duties is that of locating hospitals. And here we need not apprise the Sanatory Committee of the trial of our patience, the anxiety and the numerous difficulties experienced in every step of our progress. Anxious to avoid the necessity of sending children from any of the schools, your Committee have made unwearied efforts to secure other suitable buildings, and have been entirely unable to do so in a single case, unless at the most extravagant and enormous prices. And while at this time only one private building has been converted into a hospital, partly by agreement and partly by the necessity of our requirements, we think when all the expenses of that building are ascertained, the Committee will feel satisfied that the words "extravagant and enormous" were not wrongly applied. In short, whenever and wherever your Committee have made efforts to procure private property, that moment the alarm has been sounded, and they have been either entirely refused, or a price named so exorbitant that it could not be entertained. The expenses, ordinary and extraordinary, of our



city, have been for several years largely on the increase, and have indeed become burdensome to the people, and the augmentation of the same in consequence of the present epidemic, and the measures which have been taken to prevent its spread, (in the opinion of your Committee, wisely taken,) are already very heavy and likely to increase largely, and as faithful servants of the people, while we hold office, we consider it our duty not to lose sight of this circumstance, and as far as in our power consistent with a due regard for the best interests of all our fellow-citizens, carefully to guard the public treasury, and scrutinize every point and direction where disbursements are being made to prevent, if possible, too free a use of the public funds. The sickness in our city has not been rapid in its progress, and the Committee did not deem it advisable to erect buildings for hospitals, or to appropriate them any faster than they were actually needed, so that if the epidemic did not increase, more hospital accommodations would not be required. Modern school houses are, in the opinion of your Committee, well adapted for the purposes of cholera hospitals. They are large, well ventilated buildings, so arranged as to give one story to males, another to females, and a third to convalescents. The recitation rooms are convenient for nurses and attendants, having passages for egress and ingress, separate and distinct, so that the unfortunate sick can be taken in at one door, and the dead taken out at another, without the sick and convalescent being compelled to witness the painful ceremony of transporting the dead in their sight. These buildings are also the property of the city, and in that sense appropriate, for it is the city's unfortunate fellow-beings for whom your Committee are providing. In taking these buildings, the Corporation will avoid paying exorbitant rents, and (what is always very desirable,) litigation in any of its forms.

Again, the schools are to be closed on the 1st of August, for a vacation of a month or more, and in taking possession now, near the 1st of July, the children are deprived of, at the farthest, but

one month's tuition in the hottest summer weather. It is a matter of consideration whether they are not better off *out* than *in* school. In some instances your Committee have found them so congregated as to render the air very impure and unwholesome, so much as to have led to the enquiry whether their duty as a Sanatory Committee did not require some steps to be taken for lessening the numbers of many of these schools during the excessive heat of summer, which subject, in the opinion of your Committee, demands immediate consideration by the Sanatory Board.

Your Committee are the friends of education, whether in the elementary or higher branches. They believe the laws adopted within the last few years for improving the character of the schools in this City, opening them alike to the children of the rich and the poor, and in which all are equally well instructed, most benevolent and creditable to their authors and supporters, and not less to be prized as a real and enduring measure of public benefit than any on your statute book. They do not believe, however, that the temporary appropriation of two or four school houses, will be any serious detriment to the cause of education in this city. Admitting it an evil, it is the one of *lesser* magnitude, and should give way to the *greater*. The building selected in William street, was deemed a very suitable one in all respects, and your Committee have not yet seen any good and sufficient reason to change the appropriation thus made of Public School No. 1.

In reply to that portion of the resolution of the Board of Education, which requests the Common Council or other Corporation authorities, to give some expression against the appropriation of school houses in future, they desire distinctly, but respectfully to state, that, for the reasons herein given, they not only cannot give *any such public or private expression*, but in justice to them-

selves, to their fellow citizens who sent them here, and to those poor unfortunate beings without home, without shelter, daily and hourly needing our sympathy and aid, they cannot fail to recommend as they hereby do from this time forth, the appropriation for cholera hospitals, when other suitable buildings cannot be procured, public or ward school houses, selecting as nearly as may be, an equal number from each organization, in the belief that humanity and compassion for the destitute and dying, require the very best temporary accommodations which can be obtained, and that no others bear any favorable comparison in their adaptation to the purpose.

EDWIN D. MORGAN,	} <i>Committee on Hospitals.</i>
ALEX. H. SCHULTZ,	
ROBERT A. SANDS,	
CHARLES WEBB,	

New York, June 28, 1849.

The above report was accepted by the Sanatory Committee, and they determined to act according to the recommendations of the sub-committee. In carrying their plans into execution, however, they found themselves constantly embarrassed by difficulties. Public meetings of citizens were held, protesting against the establishment of hospitals in certain localities, while the friends of education made the most vigorous opposition to the selection of the school houses for that purpose. After a full and mature consideration of the subject, the Sanatory Committee determined that every thing ought to give way to the public good, and such of



the public schools as were deemed necessary, were successively occupied as cholera hospitals. As is generally the case, decision was followed by acquiescence, and the Committee believe that no one now denies the wisdom or propriety of the measure. The first school house selected as a cholera hospital, was in William street, under the professional charge of Dr. ALEXANDER F. VACHE; the second in Thirteenth street, under the supervision of Dr. OVID P. WELLS; the third in Stanton street, under the control of Dr. ISAAC GREENE, and the fourth in Thirty-fifth street, under the care of Dr. WILLIAM P. BUEL, who was transferred from the Centre street Hospital, on the closing of that institution, which was subsequently reopened, under the medical direction of Dr. VACHE, and continued for the reception of patients until the disappearance of the epidemic in the city.

On the 14th day of June, a petition was sent in to the Board of Health, requesting the establishment of a cholera hospital, in which patients might be treated on the homœopathic plan. This petition having been referred to the Sanatory

Committee, was by them again referred to the medical counsel, by whom the following report was made :

NEW YORK, JUNE 19th, 1849.

A resolution having been offered to the Board of Health, ' that a hospital for the reception of cholera patients, be established in this city, in which the practice of homœopathic physicians shall be pursued,' and the same having been referred by the Sanatory Committee to the Medical Counsel, the undersigned state that should the above resolution be adopted, they see no satisfactory reason why the same courtesy should not be extended to the Hydropathists—the Thompsonians—the Chrono-thermalists, and indeed all others claiming to have specific modes of treating the cholera.

By intelligent and well educated physicians generally, homœopathy is looked upon as a species of empiricism. It is neither practised by them, nor countenanced by them. Concurring entirely with their professional brethren on this subject, the undersigned conceive that the public authorities of our city would not consult either their own dignity or the public good, by lending the sanction of their name or influence to homœopathy or any other irregular mode of practice.

JOHN B. BECK, M. D.,	}	<i>Medical Counsel.</i>
JOSEPH M. SMITH, M. D.,		
SAMUEL W. MOORE, M. D.,		

SETH GEER, M. D., *Resident Physician.*

RICHARD L. MORRIS, M. D., *Health Commissioner.*

In adopting this report, the Sanatory Committee did not wish to be considered as expressing any opinion either in favor or against what is com-

monly denominated homœopathy. This they viewed as a subject entirely beyond their province. In executing a great public trust, however, which had been committed to their hands, they did not feel that they had the right of arraying themselves against any of the existing institutions of the community for whom they were acting. However defective these institutions might be, it was not for them to set about the work of reform. In looking round, accordingly, they found the medical profession existing in a certain form, exercising certain rights and privileges conceded by law, and recognized by long usage and general suffrage. The medical profession was, in fact, one of the legitimate divisions into which society had resolved itself, and for the performance of the most important functions subservient to the public good. Taking this view of the subject, the Committee felt it to be their duty to have nothing to do with medicine, except as they found it embodied in what is understood and known both by the public, as well as physicians, as the regular profession. While in this way they paid all suitable respect to so honorable a profession as that of

medicine, the Committee felt that they did no injustice to those who suppose themselves in advance of the age, and profess themselves gifted with superior knowledge and wisdom.

In providing the poorer classes of the city with all necessary medical advice and attendance, the Committee adopted two modes, which proved to be exceedingly efficient and useful. One of them was the appointment of a number of physicians, whose business it should be to be in constant attendance at the "Police Station houses," of which there is one in each Ward. The object of this, was to have some convenient and well known place in each of the Wards, where prompt assistance might be obtained by all those who felt disposed to avail themselves of it. Medicines accordingly were provided, and two physicians were appointed to each Station house, and public notice of the fact was given in the newspapers.

Beside this, the parts of the city where the cholera prevailed was divided into districts, and physicians were appointed to each district for the purpose of visiting the houses of the poor, with the view of ascertaining the existence of disease

and affording immediately the necessary relief. The number of physicians appointed to the discharge of this duty was twelve.

The amount of good accomplished by these measures, especially the last, in the way of preventing the developement of disease, the Committee believe to have been great.

On the 5th of June, the following communication, presented by the Medical Counsel, was directed to be published in each of the daily and Sunday papers :

NEW YORK, JUNE 5, 1849.

In reporting to the Sanatory Committee in relation to the cholera at present prevailing in our city, the undersigned are happy to state, that although the disease is gradually extending among us, yet in its general character it is much milder than it was when it visited this city in 1832 ; that it seems more under the control of remedies, and that the proportion of deaths is smaller. These facts are consoling, and should excite in the hearts of our citizens the liveliest feelings of gratitude to a kind Providence.

The undersigned would also state, that whatever opinions may be entertained in relation to the abstract question as to whether the cholera is or is not a contagious disease, no evidence has appeared, thus far, that the disease at present prevailing in our city, has in a single case been produced by contagion ; on the contrary, every thing connected with its history proves



that its origin and diffusion have been dependent upon causes entirely different. The simultaneous occurrence of cases in different and distant parts of the city, between whom no sort of communication could be traced, and the immunity enjoyed by those holding constant intercourse with the sick in our cholera hospitals, are facts which establish this point beyond the possibility of dispute. In not a single case, as yet, have either physician, nurse, or visitor of our cholera hospitals been known to contract the disease. These facts should dispel entirely from the minds of our citizens all fear in attending their friends and relations who may be attacked with the disease, and at the same time dissipate whatever apprehensions may hitherto have existed in the public mind in relation to the establishment of cholera hospitals in any part of our city, when called for by the demands of necessity and humanity.

The undersigned believe that the cause of the disease exists in the *atmosphere*, and that the whole community are at present more or less under the influence of this peculiar condition of the atmosphere, and in this way predisposed to the disease. To develop the disease, however, *exciting causes* are necessary, and these are to be found in all those things which have a tendency to disorder the bowels. With regard to the peculiar condition of the atmosphere which predisposes to the disease, we know nothing. Human skill and human agency, therefore, can do nothing in meeting this difficulty. The exciting causes, on the contrary, are in a great measure under our control, and by properly guarding against these, much, very much, may be done in obviating the development and extension of the disease.

JOHN B. BECK, M. D.,	} <i>Medical</i>
JOSEPH M. SMITH, M. D.,	
SAMUEL W. MOORE, M. D.,	

SETH GEER, M. D., *Resident Physician.*

RICHARD L. MORRIS, M. D., *Health Commissioner.*

On the 13th day of June, a communication was received from Professor ELLET, expressing his intention to analyze the atmosphere during the prevalence of the cholera, and requesting the co-operation of the Sanatory Committee. On being referred to the Medical Counsel, they reported as follows :

NEW YORK, JUNE 15, 1849.

A communication having been addressed to the Sanatory Committee, from Professor ELLET, in relation to analyzing the atmosphere during the prevalence of the cholera in this city, and the same having been referred to the Medical Counsel, the undersigned state, that in their opinion the subject is one of the highest importance and eminently deserving of investigation. It involves interests common to science and humanity. Whatever may be the result of the investigation, it cannot fail to attract general attention, and should any discovery fortunately be made which throws light upon the cause of the cholera, it will reflect the highest credit upon the authorities under whose sanction and patronage it originated. With regard to the qualifications of Professor Ellet, as a chemist, the undersigned deem them of the highest order, and they are of opinion that the whole subject may be safely entrusted to his hands.

JOHN B. BECK, M. D.,	} <i>Medical</i>
JOSEPH M. SMITH, M. D.,	
SAMUEL W. MOORE, M. D.,	

*Counsel.*

SETH GEER, M. D., *Resident Physician.*

RICHARD L. MORRIS, M. D., *Health Commissioner.*

Convinced of its importance, the Committee



felt a deep interest in this subject, and were prepared to make an appropriation for the purpose of aiding Prof. ELLET in the prosecution of his researches; but on consultation, they found that he preferred going on upon his own responsibility, under the sanction of the Board. A copy of the above report, certified by the Sanatory Committee, was accordingly transmitted to Professor ELLET. The results of these investigations will be found in a communication from Professor ELLET.\*

On the 23d of June, the following communication from the Medical Counsel, was directed to be published in the editorial columns, three times in each of the daily papers, and once in each of the Sunday papers :

NEW YORK, JUNE 23, 1849.

The undersigned, in the discharge of their duty as the Medical Counsel to the Sanatory Committee, are happy to state that although the cholera is still prevailing in our city, yet it does not appear to be on the increase. They are confidently of opinion that this is owing to the observance on the part of our citizens generally, of those prudential measures which have been so strenuously recommended by the Sanatory Committee. With regard

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\* See Appendix, No 2.

to the cases which have occurred, the undersigned state that so far as their observation has extended, they have been mainly referable to three causes, viz: the neglect of a relaxed state of the bowels—the taking of cathartic medicines—and imprudencies in diet. They would therefore, take the liberty of urging upon their fellow citizens the necessity of the most rigid and continued caution in relation to all these circumstances. Let not a diarrhœa be neglected for a single moment—let no cathartic medicine be taken except by the direction of some regular physician—and with regard to diet, let the utmost prudence be observed both in the quantity as well as the quality of the food which is taken. During the excessive heat, at present prevailing in our city, the digestive organs are necessarily much enfeebled, and the overloading the stomach, even with good food, is frequently as injurious as taking those things which are known to be indigestible.

JOHN B. BECK, M. D.,  
JOSEPH M. SMITH, M. D., } *Medical Counsel.*  
SAMUEL W. MOORE, M. D., }

SETH GEER, M. D., *Resident Physician.*

RICHARD L. MORRIS, M. D., *Health Commissioner.*

Believing that moral influences exercised no inconsiderable control over the cholera, the Committee thought that they might advantageously call upon the clergy of our city to co-operate with them in their endeavors to arrest, if possible, its progress. They accordingly prepared the following circular, a copy of which was addressed to every clergyman in our city:

NEW YORK, CITY HALL, JULY 6, 1849.

REV. SIR :

The Sanatory Committee of the Board of Health, in their endeavors to mitigate the evils, and if possible, limit the extension of the cholera in our city, deem it their duty to call upon the clergy for their aid and co-operation. The Committee believe that the clergy may do much good, by addressing their congregations on the subject of the present epidemic, if not in a formal, at least in an incidental manner. Without presuming to dictate, the Committee believe that the points which might be most advantageously alluded to, besides the ordinary imprudencies in the mode of living, are the injurious effects of fear and of excitement, whether mental or physical. A composed state of mind, and a humble but cheerful reliance on Providence, are all important in times like the present.

As congregations differ so widely in their general character and habits, the mode of addressing them is best determined by the particular clergyman attached to each, and to his discretion and judgment, the whole matter is respectfully submitted.

JAMES KELLY, <i>Chairman</i> ,	} <i>Sanatory Committee of the Board of Health.</i>
ROBERT T. HAWS,	
ALEX. H. SCHULTZ,	
CHARLES WEBB,	
GEORGE H. FRANKLIN,	
EDWIN D. MORGAN,	
ROBERT A. SANDS,	
JACOB F. OAKLEY,	
OSCAR W. STURTEVANT,	

JOHN B. BECK, M. D.,	} <i>Medical Counsel.</i>
JOSEPH M. SMITH, M. D.,	
SAMUEL W. MOORE, M. D.,	

SETH GEER, M. D., *Resident Physician*,

RICHARD L. MORRIS, M. D., *Health Commissioner.*

The Committee are happy to state that this circular was favorably received, and they have no doubt that the exhortations made both in private and from the pulpit were of eminent service.

They also acknowledge, with gratitude, the liberal contributions which were made in some of the churches, for the benefit of the poor.\*

Many thanks are due to Messrs. CLARKE & Co., for their kind offer to furnish the sick of the hospitals, with "Congress Spring" water, and for the abundant supply of it, without remuneration.

One of the subjects which attracted a large share of the attention of the Committee was that of *nuisances*. As might naturally be supposed in so large a city as New York, and containing a

\* The following distribution was made of these monoyes:

By amount of collection in Grace Church.....	\$200 00
"    "    Brick    "    .....	76 80
"    "    Mercer st. "    .....	51 40
"    "    Trinity    "    .....	83 09
"    "    St. Paul's    "    .....	84 82
"    "    St. Johu's    "    .....	92 72
"    "    Church of the Mediator.....	114 65
	<hr/> \$703 48
To amount paid 11 Visiting Physicians to relieve the poor.....	\$275 00
Less amount returned by them unexpended.....	37 25
	<hr/> 237 75
To amt. paid Society for Amelioration of the Condition of the Poór, .....	465 73
	<hr/> \$703 48

population of so heterogeneous a character, almost daily complaints were made of their existence, and urgent petitions sent in requesting their immediate removal. Wherever it was in the power of the Committee to do so, they promptly applied the proper corrective. In many cases, however, difficulties presented themselves not appreciated by the public, and which were not so readily overcome. It is not every thing that is offensive to the sight or smell that is really a nuisance. What is looked upon as such by one class of persons, is not so by another. It is not always so easy therefore to decide at once what is a nuisance, and how far the authorities are justified in removing or suppressing it. Private rights too, are not to be encroached upon, unless evidently required by the public good. In some of the large manufacturing establishments too, considered as nuisances, hundreds of hands are employed, and upon which they depend for daily subsistence, and which ought not to be interfered with unless for the most imperative reasons of general and public security. The Committee make these remarks, in reply to the constant cen-



asures cast upon them by a certain portion of the public press, in relation to this matter. The Committee have only to say, that they acted in all cases according to the best of their judgment and discretion. While they endeavored to respect private rights as much as possible, they did not hesitate to suppress establishments however large, which were manifestly injurious to the health of the surrounding population.\*

The Committee cannot dismiss this part of their report without bearing the testimony of their approbation to the indefatigable labors of the Captains of Police and their Health Wardens, in

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\* The Committee were vested with full power over these matters, by the following resolution, passed by the Board of Health :

BOARD OF HEALTH.—At a meeting of the Board of Health, held July 14, 1849, the following preamble and resolution were adopted, and directed to be published.

D. T. VALENTINE, *Clerk.*

*Whereas*, Numerous complaints of an aggravated character, have been made to the Sanatory Committee of this Board, of the existence in this city of extensive manufactories of starch, soap and bone-boiling establishments, slaughter houses and other nuisances, the miasmas and exhalations of which are intolerable and injurious to public health; and

attending to the cleansing of the city. They take the liberty, however, of adding that the department which has the cognizance of nuisances is one of the most onerous, as well as important, connected with our city government. As at present constituted, it is wholly inadequate to the wants of our city. It requires an entire re-organization, and for this purpose, no period seems more appropriate than the present. The labors of your Committee, during the past appalling season of sickness

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*Whereas*, Upon examination, the neighborhoods of such places have been visited with unusual sickness and deaths by cholera, and

*Whereas*, The parties owning such establishments have refused to cause an abatement of said evils, after being duly notified, therefore, be it

*Resolved*, That this Board, in the exercise of the authority conferred upon it by the laws of this State, for the suppression and abatement of all nuisances that may be deemed and declared to be deleterious to public health and promotive of epidemical disease, do hereby empower and direct the Sanatory Committee of this Board to cause all such places mentioned in the foregoing preamble, and all other places of the like character, to be immediately shut up, and the business thereof discontinued during the prevalence of the said epidemic, and until the further order of the Board of Health.



and death, and the awful scenes of degradation, misery and filth developed to them by their researches, have brought into full view the fact, that we have *no Sanatory Police* worthy of the name; that we are unprotected by that watchful regard over the public health which common sense dictates to be necessary for the security of our lives, the maintenance of the city's reputation, and the preservation of the interests of its inhabitants. Cholera may again assail us before we know it, and it is the dictate of true policy to be prepared in season to meet it; and not cholera alone, but any and every other malady which may be produced or aggravated by local causes. To no other work should the authorities address themselves more earnestly than the establishment of a thoroughly organized medical police, at whose head should be an active and experienced medical man. The advantages of such a measure would be incalculable.

On the 6th of August, the following communication from the Medical Counsel, was ordered to be published in all the daily papers of the city:

August 6th, 1849.

The Medical Counsel of the Sanatory Committee, in the discharge of their duty, feel themselves called upon again to address a few words of advice and precaution to their fellow citizens.

In the first place, as the season has arrived when our markets are usually flooded with fruits of all descriptions, many of which are unripe, and some in a state of decay, our citizens cannot be too cautious how they indulge in the use of them. Even in ordinary seasons they are known to be the prolific source of serious and fatal bowel complaints. During the present season they are doubly pernicious. With regard to children especially, of all ages, every effort should be made to prevent them from either touching or tasting them. A single indiscretion in this respect, has been known to be fatal to life.

In the second place, during the hot season the greatest caution should be observed in incurring unnecessary exposure and fatigue. Some of our most valued citizens, it is to be feared, have, by such imprudence, sacrificed their lives. Let the pursuits of gain and the excitements of business be suspended, or at least moderated, for a time, and let every person who feels himself indisposed rest quietly at home for a few days, until the exhausted energies of the system are rallied. The undersigned are convinced that many a useful life might be saved by this simple precaution.

In the third place, the undersigned would again urge upon their fellow citizens the necessity of endeavoring, by every means in their power, to preserve a calm and composed state of mind. Melancholy experience has shown that among all the exciting causes of the cholera, none is so likely to bring it on, as a perturbed state of mind. Let our citizens rest assured that a manly courage, with an humble reliance on a beneficent Providence for protection, is one of the best preservatives against the assaults of this disease. Judging from past experience, as well as from pre-

sent appearances, the undersigned believe that we have seen the worst of the cholera, and that not many weeks will elapse before returning health will bless our city

JOHN B. BECK, M. D.,  
JOSEPH M. SMITH, M. D.,  
SAMUEL W. MOORE, M. D., } *Medical Counsel.*

SETH GEER, M. D., *Resident Physician.*

RICHARD L. MORRIS, M. D., *Health Commissioner.*

In the progress of the cholera, it became manifest that the daily reports of the Sanatory Committee, and the weekly reports of the City Inspector did not correspond. The discrepancy, indeed, became so great as to attract general attention. The cause of this discrepancy was self-evident—many physicians not considering themselves compelled to report their cases, neglected to do so altogether—others merely reported cases without afterwards feeling themselves obliged to report the result. In this state of things, it was manifest that neither cases, nor deaths, especially the latter, could be reported with any degree of accuracy. On the other hand, as no person could be buried without its being reported to the City Inspector, his list of deaths would be much larger than that of the Committee. In all

this, the Committee hold themselves blameless. They could do no more than they did ; they could only report the cases handed in to them by the physicians, precisely what the City Inspector did. The fault lay entirely with certain physicians, who, through mistaken views, resisted the execution of the law. The Committee regretted this exceedingly ; it threw discredit upon the accuracy of their daily reports, while it betrayed a spirit on the part of the physicians unworthy of them as good citizens and members of a liberal profession. For the purpose of enforcing the requisitions of the law, the Committee issued the following :

#### BOARD OF HEALTH.

*The Board of Health of the City of New York do ordain as follows :*

§ 1. Each and every practising physician in the city of New York, shall, daily, at ten o'clock, report to the Board of Health of the said city, the number of persons attacked with Asiatic cholera in said city, or any other malignant diseases attended by such physician for the twenty-four hours preceding, and the number of persons attended by such physician who shall have died during the twenty-four hours preceding such report of Asiatic cholera, or other malignant diseases. Such report shall particularly specify the disease of each person mentioned therein. And such report shall also contain the birth place, residence, sex and



occupation of the person so sick or dead, if the same can be ascertained, and the age of the person so sick or dead.

§ 2. Such daily report shall be signed with the name of the physician making the same, and shall be left daily, and before the hour of eleven o'clock each day, at one of the Station houses of the several Wards in this city, with the Captains of Police, or some person in charge thereof, directed to the President of the Board of Health of the city of New York: and the persons so receiving the same shall immediately cause to be delivered the several reports so received, at the office of the Board of Health, in the City Hall of said city.

§ 3. Each and every physician who shall neglect or refuse to make such report, and deliver the same as aforesaid, shall be proceeded against as provided in and by the sixth section of the act of June 22d, 1832.

By order of the Board of Health.

JAMES KELLY, President *pro tem*.

N. B.—The Board of Health, for the information of physicians and others, publish the sixth section of the act of June 22d, 1832, now in force, and which is as follows:—

§ 6. Every person who shall wilfully violate any regulations so to be made and published by such Board of Health, shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be subject to fine and imprisonment, or both, at the discretion of the Court; such fine not to exceed one thousand dollars, nor such imprisonment two years.

On the 5th September, 1849, the following report was presented by the Medical Counsel, which was accepted; and, on motion, it was



*Resolved*, That after this day the Board discontinue making daily reports to the public, but that physicians will be required to make reports as heretofore of such cases as may occur.

NEW YORK, September 5, 1849.

The undersigned, Medical Counsel of the Board of Health, are happy to state, as their opinion, that the cholera, in its epidemic form, may be considered as having, in a great measure, ceased to exist in our city. In a short time, it is hoped and believed, that it will be entirely extinct. In expressing the foregoing opinion, the undersigned deem it to be their duty to add that the long continuance of the cholera atmosphere has created predispositions to disease, which cannot of course, be at once eradicated. They would therefore, exhort their fellow-citizens not to abandon, prematurely, those prudential measures with regard to their modes of living, which have been so frequently urged upon their attention, and which, it is believed, have had a most salutary influence in limiting the extent of the disease. With due attention to these, the undersigned are of opinion that our citizens may return to their homes in perfect security, and that our city may be visited by strangers with as much security as any portion of the country.

JOHN B. BECK, M. D.,	}	<i>Medical Counsel.</i>
JOSEPH M. SMITH, M. D.,		
SAMUEL W. MOORE, M. D.,		

SETH GEER, M. D., *Resident Physician.*

RICHARD L. MORRIS, M. D., *Health Commissioner.*

The Committee have thus endeavored to give a full account of their proceedings during the prevalence of the epidemic cholera in our city. Under Providence, they believe they have accomplished

a great amount of good, and they trust their proceedings will receive the sanction of the Board of Health.

The Committee herewith submit reports from the Resident Physician and the Hospital Physicians, containing all the necessary information, in relation to the statistics and treatment of the recent epidemic.

JAMES KELLY, <i>Chairman</i> ,	} <i>Sanatory Committee.</i>
ROBERT T. HAWS,	
ALEX. H. SCHULTZ,	
CHARLES WEBB,	
GEORGE H. FRANKLIN,	
EDWIN D. MORGAN,	
ROBERT A. SANDS,	
JACOB F. OAKLEY,	
OSCAR W. STURTEVANT,	}



# APPENDIX.

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NO. I.

## REPORT OF SETH GEER, M. D.,

*Resident Physician of the City of New York.*

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THE Resident Physician of the city of New York, in compliance with a resolution of the Sanatory Committee of the Board of Health, to furnish a report on the general history of the epidemic which has recently visited us, together with such statistics as may have been furnished by the various Medical Departments, herewith submits the following

### REPORT:

On the 15th of last May, I received a communication from his Honor Mayor WOODHULL, informing me that through Dr. F. HARRIOT, he had learned that four cases of a disease resembling cholera, had occurred at No. 20 Orange street, (a part of the "Five Points") accompanied with a request that I would repair to the above place, and discover, if possible, the nature of the disease prevailing in that locality, and report the results of my investigations.

In accordance with these instructions, I visited the place designated, and in a rear basement, surrounded with filth and wretchedness, I found the body of a woman, who a few minutes before had expired. There was no mistaking the cause of death—the pinched and sharpened visage—the corrugated, blue, and attenuated appearance of the body showed too plainly the nature of the disease which had marked its victim—Asiatic cholera was manifested in every expression. While there, I endeavored to obtain what information I could from the persons by whom she was surrounded; yet I found it almost impossible to get a reply to the most simple interrogatory. In truth the idiotic condition which rum, debauchery and extreme wretchedness had reduced the intellects of these loathsome objects of humanity, completely incapacitated them from comprehending the meaning of the most simple question. From Dr. F. HARRIOT, the following particulars of the first seven cases have been obtained. On Friday, May 11th, Dr. H. was called upon to attend James Gilligan, a laborer, residing in the rear basement of No. 20 Orange street, who had sickened the night previous with vomiting and purging, attended with cramps. Having indulged freely in intoxicating drinks, &c., the night previous, his sickness was attributed to this cause, and he was treated accordingly. On the following day, he was better, and hopes were entertained of his recovery. On Monday, the 14th, Dr. H. learned that two women, lying in the same cellar, had sickened on the evening of the 12th, in a similar manner. On again visiting the place, he found the two women and his previous patient (Gilligan), presenting all the appearance of the stage of collapse of cholera. Their situation was truly deplorable—lying on a few filthy



rags on the half decayed floor of a miserably damp and dark basement, with clothing hardly sufficient to cover their nakedness—the odor on entering the place was disgusting in the extreme. Two of these cases died in a few hours. On the afternoon of the 14th, another sickened; this case died early the next morning. On the 16th, three more cases occurred in the same place, thus making a total of seven cases of cholera occurring already at No. 20 Orange street. On this day, the 16th, and the one following my visit, the Mayor convened the Board of Health, and made known to them the fact that the cholera had made its appearance at the “Five Points.”

Although many of the members composing the Board of Health were but recently sworn into office, and consequently, as might be supposed, would not act with that promptness and energy which such an occasion required, yet they at once directed the proper authorities to repair to the locality where the disease had appeared, and not only employ every sanitary measure calculated to cleanse and purify the place, but to use every human effort to effect a thorough expulsion of all matters throughout the “Points,” which might serve as a *pabulum* upon which the disease could feed. These, together with the establishment of a temporary hospital, at 127 Anthony street, were the work of a very short period of time. The hospital was placed under the charge of Dr. W. P. BUEL, as physician to the same, and to which all seized with the disease were at once conveyed.

The Committee had innumerable difficulties to encounter while the disease lasted, one of the greatest was to obtain hospitals for the reception of the sick, and they did

not gain possession of the first in Anthony street, (although intended only for temporary use), until the chairman of the Sanatory Committee and some other of its members, after an unsuccessful negotiation, were obliged to force open the door of the building and take possession.

Notwithstanding the precautionary measures which were so promptly adopted and carried out in the locality where the cholera first appeared, it gradually spread itself over the "Points" and continued prevalent for a brief period of time ; and there is no doubt but that the sanatory measures which were here adopted, did much to lessen the extent and malignancy of the disease.

On the 20th of May, his Honor Mayor WOODHULL, the Sanatory Committee and the Medical Counsel visited the temporary hospital in Anthony street, and afterwards made a thorough inspection of the "Five Points." The streets were found perfectly clean, although some of the houses, alley-ways, yards and pig-styes in this locality required cleansing. Orders were accordingly left with the Health Warden and Captain of the Police, to superintend the work of purifying the same. In accordance with which, over three thousand hogs were removed to the outskirts of the city.

On the 26th of May, the Sanatory Committee reported two cases and one death as having occurred by cholera in a new locality (No. 10 Mulberry street), and about four hundred yards from the "Five Points." The first case which occurred in this place, was that of a woman, who was immediately conveyed to the Centre street hospital, corner of Centre and Pearl streets (which in the meantime had

been established by the Sanatory Committee), in a state of collapse, and who died in a few hours after admission. Several cases followed, and soon after the disease prevailed here as an epidemic. This locality, upon examination, was found in a filthy condition, yet through the active agency of the Health Warden, Mr. FRANCIS OWENS, who was as efficient an officer as any in the employ of the Sanatory Committee, the place soon bore a very different appearance. From this time, cases began to occur in different parts of the city, apparently without any connection with the previous cases, and the disease was now considered as having fairly assumed an epidemic character. It became necessary at this time, that some provision should be made for the poor and destitute, so that at any time they were stricken down by the epidemic, they could at once be provided with medical attendance and medicines from the different Station houses. To effect this object, a resolution was passed by the Sanatory Committee, to appoint two physicians for each Ward, whose duty it should be to visit and prescribe for all such as were attacked and unable to pay for attendance, and furnish for their use such medicines as were required.

The following named gentlemen were accordingly appointed as Ward Physicians :

Edward McGregor,.....48 Liberty street,  
 Jarvis M. Andrews,.....46 Pearl street,  
 P. W. Macdonnell,.....74 Beekman street,  
 Thomas W. Henry,.....75 Beekman street,  
 A. S. Doane,.....cor. Warren and Church,  
 Alexis Smith, (since deceased.)  
 A. H. Jones,.....148 Chambers street,

Joseph Hilton,.....44 Oak street,  
 William O'Donnell,.....41 Oliver street,  
 James Kennedy,.....186 Duane street,  
 J. Sage Kilbourne,.....126 Franklin street,  
 Owen Sweeney,.....97 Elm street,  
 C. Conning, .....30 Bowery,  
 R. S. Carpenter,.....3 Mulberry street,  
 William H. Clussman,.....11 Market street,  
 Saamuel Rotton,.....78 Jefferson street,  
 A. K. Gardiner,.....153 Wooster street,  
 Samuel S. Purple,.....183 Hudson street,  
 Edward R. Chapin,.....3 Eighth avenue,  
 William J. Johnson,  
 Samuel B. Phillips,.....415 Hudson street,  
 Daniel Wells,.....98 Eldridge street,  
 W. S. Tompkins,.....161 Bowery,  
 N. H. Cheseborough,.....639 Fourth street,  
 Elias S. Nichols,.....Columbia street,  
 John Ives,.....Forty-eighth street,  
 William Cecil, .....Eighty-sixth street,  
 G. A. Hills,.....126th street,  
 J. C. Hepburn,.....Forty-eighth street,  
 G. Prince,.....18 Columbia street,  
 W. Churchill,.....173 Clinton street,  
 Cornelius B. Archer,.....210 Mulberry street,  
 H. W. Thayer,  
 Samuel L. Griswold,.....328 Fourth street,  
 John W. Hubbell,.....201 West 18th street,  
 John S. Carter,.....187 West 19th street,  
 Bern W. Budd,.....22 Third street,  
 Thomas M. Franklin,.....11 East 17th street,  
 John Busteed,.....East 27th, bet. 2d & 3d av.  
 John G. Sewall,.....372 Fourth avenue,



At the same time two sets of men were appointed to each Ward, whose duty it was to convey the poor and helpless, who sickened with cholera, to the Centre street and other hospitals, which were soon after established.

On the 8th of June, the public school house No. 1, in William street, near Duane, was appropriated by the Sanatory Committee, and opened on the 9th for the reception of patients, under the care of Dr. ALEXANDER F. VACHE. This hospital, like that of Centre street, and those that were subsequently opened, were well supplied with physicians, nurses and orderly men.

On the 8th of June, a case of cholera occurred at Nos. 7 and 9 Washington street, in the First Ward. The person seized was a woman named Mary M'Annally, a servant in the employ of Michael Burke, keeper of an emigrant boarding-house. She was at once conveyed to the Centre street hospital, where she died on the 10th of June. The disease here for a period of two weeks, continued with considerable violence. The localities where it was most fatal, was in Washington, West, Morris, Cedar and Thames streets. Soon after it broke out in Trinity place, and in a short time disappeared almost entirely from this part of the city. During the existence of the cholera in these localities, a number of very severe cases occurred. Many proved fatal. Those who sickened were immediately conveyed by the sedan-carriers to the hospitals, and the several places where the disease prevailed, thoroughly disinfected and cleansed in every part.

On the 1st of June the first case of cholera occurred in the Seventh Ward. The name of the person attacked was



Abraham Devoe, residing at No. 21 Catharine street. On the 2d of June a case occurred at No. 218 Cherry street, and terminated fatally in six hours. The cases in the Ward, from this time up to the 20th of June, were merely sporadic. From this date, however, to the 1st of August, it appeared with great violence at Nos. 430, 446, 448 and 445 Water street, and shortly after at No. 151 Cherry street. From these localities the disease followed to East Broadway, near Rutgers street; and after a period of two weeks, again broke out in Scammel, Cherry, Water, Walnut, Madison and Division streets. From the 10th of June to the 20th of August, one hundred and seventy deaths by cholera occurred in this Ward. Many of the population in the localities referred to were emigrants, and persons utterly destitute of the ordinary comforts of life. Such of those as sickened with the disease were taken to the cholera hospitals, where every attention was given them, and after a brief period the disease subsided, and appeared next in the Twelfth and Sixteenth Wards. The cholera first appeared in the Sixteenth Ward, June 23. On this day, a case occurred in Thirty-third street, near the Tenth avenue, and on the 9th of the same month the disease became epidemic from Twenty-fourth to Fortieth street, and from the Eighth avenue to North river. On the elevated ground in the neighborhood of Thirty-fifth street, from the Ninth avenue to the North river, it raged with great violence. In many instances eight and ten persons from one house were seized and died of the disease. The cholera was equally malignant in Thirty-third street, near the Tenth avenue, and continued epidemic in these localities until the latter part of August. In the Twelfth Ward, the first case of cholera occurred on the 8th of June, in Forty-

second street, between the Ninth and Tenth avenues. The disease in a few days was disseminated over the whole Ward, and continued with unabated violence for a period of nearly two months. At Harlem and Manhattanville the first cases occurred about the middle of July. As many as thirty deaths by cholera occurred, and about the middle of September the disease here was entirely extinct.

The cause of its long continued and malignant character in this part of the city, can only be accounted for from the fact that there were found many filthy localities spread over the surface which was occupied by the epidemic. Several bone boiling establishments were discovered, with immense piles of bones scattered around, while heaps of the same were found with meat attached, and all in an advanced state of decomposition, and exhaling a stench which was horrible in the extreme. These, together with manure heaps, pools of stagnant water and a horse killing establishment, were believed to contribute much towards prolonging the epidemic character of the disease; in consequence of which, the Sanatory Committee were obliged to close these establishments until the disease ceased to exist among us.

Owing to the alarming extent of the malady in this part of the city, the Sanatory Committee were compelled to establish additional hospitals for the reception of cholera patients. Accordingly, on the 15th of July they opened the public school house No. 17, in Thirteenth street, as a cholera hospital, and placed the same in charge of Dr. O. P. WELLS, and on the 27th of July, they established another in public school house No. 16, in Thirty-fifth

street, and appointed Dr. WILLIAM P. BUEL as physician to the same. They also passed a resolution appointing two physicians for each of the Eleventh, Twelfth, Thirteenth, Sixteenth, Seventeenth and Eighteenth Wards, whose duty should be to visit from house to house, and ascertain their sanatory condition, and the health of their inmates, and report from time to time the result of their investigations to the Sanatory Committee. To effect this important measure, the following named gentlemen were appointed :

Eleventh Ward, J. J. MEIGS, M.D., C. B. DAYTON, M. D.

Twelfth Ward, LEWIS A. SAYRE, M. D., JAMES BATHGATE, M. D.

Thirteenth Ward, THOMAS F. ROCHESTER, M. D., GEO. W. IVES, M. D.

Sixteenth Ward, JOHN W. HUBBELL, M. D., JOHN S. CARTER, M. D.

Seventeenth Ward, JAMES MANLEY, M. D., H. F. QUACKENBOS, M. D.

Eighteenth Ward, D. J. CARROLL, M. D., HENRY E. COX, M. D.

On the 26th of August the cholera had assumed an epidemic type, and extended from the localities in the upper part of Cherry and Water streets, over a large proportion of the north-eastern part of the city, taking in the Seventh, Thirteenth, Tenth and Eleventh Wards, in consequence of which it was deemed necessary to establish a hospital in public school house No. 5, on the corner of Stanton and Sheriff streets. This place was opened on the 2d of July, and Dr. ISAAC GREENE was appointed to superintend the same, and closed on the 17th of September.

The disease, while it raged with unabated violence in the upper Wards, was rapidly declining in most of the lower Wards of the city, and although this fact was generally noticed in the newspapers of the day, yet it was thought advisable by the Sanatory Committee to authorize the Resident Physician, at the earliest opportunity, to make an official announcement to the business public that they need apprehend no danger in visiting the business portion of our city. In accordance with these instructions, he published the following card :

TO THE BUSINESS PUBLIC.—As the season of the year is fast approaching when it will become necessary for merchants and travellers to leave their several homes in the different sections of the United States, with a view to the various objects which trade and other pursuits require, and believing many who contemplate visiting our city may be prevented from so doing by fear, and the many exaggerated reports which may have attained currency in the country concerning cholera in New York, I deem it due to the cause of truth and the business interests of our city, to counteract the evil tendency of such rumors by a statement of facts, obtained through the politeness of Dr. WHITE, the City-Inspector, which, by the following statistics, shows the number of deaths as having occurred by cholera during the last week, in the business portion of our city, which comprises the First, Second, Third, Fourth and Fifth Wards, are as follows :

In the First Ward there have occurred, from the 11th to the 18th of August, eight deaths by cholera ; in the Second, two, and in the Third, two. In the Fourth, Sixth and Fourteenth, thirty-five, thirty of which were in the William street hospital ; in the Fifth, twelve. Total, fifty-nine.

The disease, most unquestionably, reached its culminating point about July 21, since which time (as shown by the weekly reports



of the City Inspector, and the subsequent reports of the Sanatory Committee,) it has been rapidly declining.

I am, therefore, of the opinion that merchants and others who desire to visit our city, may do so with impunity, as I believe the business portion of the same to be as free from the epidemic as any other part of our Union.

SETH GEER, M. D., *Resident Physician*

The cholera declined with great rapidity about the latter part of August, and continued to diminish until the 6th of September, when it was thought advisable to discontinue making daily reports to the public.

As a precautionary measure, however, the Thirteenth street hospital remained open to the eleventh of September; the Stanton street, to the seventeenth, and the Centre street until the ninth of October.

The duration of the disease, with the exception of isolated cases introduced into the city from emigrant vessels, was from May 10th to October 1st, making a total of one hundred and forty-three days.

The number of persons admitted into the five hospitals were 1901. Males, 985; females, 916. Deaths, 1021; cured, 880. Per centage of cures, 46.29; deaths, 53.71.

For the characters and habits of the patients, the stages of the disease in which they were received, and the general treatment of the sick, I refer the Sanatory Committee to the registers, and the communications of the able gentlemen in charge of the several institutions.



The following table exhibits the weekly mortality in the city of New York by cholera, and that from bowel complaints, during the past twenty-two weeks (May 20th to October 14th), and also the same during the corresponding periods of last year.

| 1848.           |                       |                      |                      |                    |           |            |                                               |                                             |                                         | 1849.           |                       |                      |                      |                    |           |            |                                           |                                             |                                         |
|-----------------|-----------------------|----------------------|----------------------|--------------------|-----------|------------|-----------------------------------------------|---------------------------------------------|-----------------------------------------|-----------------|-----------------------|----------------------|----------------------|--------------------|-----------|------------|-------------------------------------------|---------------------------------------------|-----------------------------------------|
| WEEK<br>ENDING. | Total mor-<br>tality. | Cholera<br>asphyxia. | Cholera<br>infantum. | Cholera<br>morbis. | Diarrhœa. | Dysentery. | Inflammation<br>of the stomach<br>and bowels. | Other diseases<br>of stomach<br>and bowels. | Mortality from<br>bowel com-<br>plaint. | WEEK<br>ENDING. | Total mor-<br>tality. | Cholera<br>asphyxia. | Cholera<br>infantum. | Cholera<br>morbis. | Diarrhœa. | Dysentery. | Inflammation<br>of stomach<br>and bowels. | Other diseases<br>of stomach<br>and bowels. | Mortality from<br>bowel com-<br>plaint. |
| May 20 285      | 247                   | 2                    | 5                    | .....              | 3         | 5          | 14                                            | 2                                           | 26                                      | May 19 323      | 1                     | .....                | 6                    | 5                  | 6         | 10         | 1                                         | 29                                          |                                         |
| " 27 228        | 228                   | 4                    | 4                    | .....              | 4         | 4          | 11                                            | 2                                           | 26                                      | " 26 294        | 13                    | .....                | 1                    | 9                  | 4         | 16         | .....                                     | 37                                          |                                         |
| June 3 245      | 245                   | 4                    | 4                    | 2                  | 2         | 4          | 6                                             | 1                                           | 17                                      | June 2 270      | 29                    | 2                    | 9                    | 11                 | 6         | 11         | 1                                         | 69                                          |                                         |
| " 10 250        | 250                   | 8                    | 7                    | .....              | 1         | 4          | 8                                             | .....                                       | 22                                      | " 9 409         | 121                   | 4                    | 12                   | 17                 | 11        | 13         | 3                                         | 181                                         |                                         |
| " 17 263        | 263                   | 22                   | .....                | .....              | 5         | 5          | 9                                             | 2                                           | 37                                      | " 16 425        | 145                   | 5                    | 13                   | 10                 | 4         | 15         | .....                                     | 183                                         |                                         |
| " 24 288        | 288                   | 29                   | .....                | .....              | 7         | 4          | 19                                            | .....                                       | 30                                      | " 23 473        | 152                   | 10                   | 10                   | 10                 | 10        | 13         | .....                                     | 211                                         |                                         |
| July 1 285      | 285                   | 22                   | .....                | .....              | 8         | 5          | 13                                            | 1                                           | 76                                      | " 30 702        | 286                   | 34                   | 15                   | 15                 | 17        | 18         | .....                                     | 389                                         |                                         |
| " 8 285         | 285                   | 29                   | .....                | .....              | 10        | 18         | 19                                            | .....                                       | 83                                      | July 7 991      | 317                   | 31                   | 18                   | 10                 | 25        | 25         | 7                                         | 1                                           | 415                                     |
| " 15 284        | 284                   | 26                   | .....                | .....              | 13        | 24         | 18                                            | 2                                           | 90                                      | " 14 702        | 484                   | 64                   | 18                   | 18                 | 55        | 44         | 14                                        | .....                                       | 680                                     |
| " 22 299        | 299                   | 29                   | .....                | .....              | 19        | 26         | 14                                            | 1                                           | 99                                      | " 21 1409       | 714                   | 102                  | 24                   | 24                 | 61        | 71         | 29                                        | .....                                       | 1011                                    |
| " 29 408        | 408                   | 52                   | .....                | .....              | 19        | 44         | 20                                            | 1                                           | 142                                     | " 28 1352       | 692                   | 105                  | 20                   | 20                 | 49        | 58         | 16                                        | 2                                           | 970                                     |
| Aug. 5 368      | 368                   | 44                   | .....                | .....              | 12        | 41         | 19                                            | 1                                           | 120                                     | Aug. 4 1011     | 423                   | 86                   | 19                   | 64                 | 68        | 21         | 18                                        | 3                                           | 944                                     |
| " 12 338        | 338                   | 52                   | .....                | .....              | 22        | 46         | 14                                            | 2                                           | 132                                     | " 11 1011       | 387                   | 98                   | 13                   | 19                 | 55        | 78         | 17                                        | 2                                           | 652                                     |
| " 19 351        | 351                   | 46                   | .....                | .....              | 10        | 34         | 13                                            | .....                                       | 115                                     | " 18 968        | 233                   | 67                   | 8                    | 52                 | 79        | 11         | 12                                        | 3                                           | 461                                     |
| " 26 331        | 331                   | 37                   | .....                | .....              | 18        | 37         | 12                                            | 1                                           | 104                                     | " 25 687        | 171                   | 68                   | 3                    | 40                 | 40        | 79         | 11                                        | 3                                           | 375                                     |
| Sept. 2 309     | 309                   | 31                   | .....                | .....              | 20        | 34         | 14                                            | .....                                       | 106                                     | Sept. 1 520     | 94                    | 47                   | 4                    | 24                 | 24        | 87         | 12                                        | 1                                           | 239                                     |
| " 9 278         | 278                   | 22                   | .....                | .....              | 11        | 38         | 14                                            | 1                                           | 83                                      | " 8 378         | 36                    | 23                   | 4                    | 21                 | 65        | 16         | 2                                         | 160                                         |                                         |
| " 16 261        | 261                   | 17                   | .....                | .....              | 13        | 27         | 7                                             | .....                                       | 93                                      | " 15 386        | 21                    | 19                   | .....                | 14                 | 55        | 16         | .....                                     | 128                                         |                                         |
| " 23 236        | 236                   | 9                    | .....                | .....              | 7         | 27         | 8                                             | 3                                           | 48                                      | " 22 319        | 11                    | 12                   | 2                    | 3                  | 45        | 16         | .....                                     | 105                                         |                                         |
| " 30 271        | 271                   | 6                    | .....                | .....              | 3         | 28         | 12                                            | 1                                           | 60                                      | " 29 312        | 6                     | 12                   | 3                    | 2                  | 38        | 29         | .....                                     | 79                                          |                                         |
| Oct. 7 260      | 260                   | 3                    | .....                | .....              | 8         | 19         | 10                                            | 1                                           | 44                                      | Oct. 6 219      | 3                     | 4                    | 1                    | 2                  | 7         | 18         | 12                                        | 1                                           | 63                                      |
| " 14 260        | 260                   | 3                    | .....                | .....              | 12        | 19         | 10                                            | 1                                           | 44                                      | Oct. 13 219     | 3                     | 4                    | 1                    | 2                  | 7         | 18         | 12                                        | 1                                           | 63                                      |
| Totals 6362     | .....                 | 492                  | 27                   | 227                | 518       | 291        | 24                                            | 1565                                        | Totals 15,219                           | 5017            | 901                   | 226                  | 615                  | 949                | 344       | 34         | 8064                                      |                                             |                                         |

In concluding this general historical outline of the cholera, as it has recently appeared among us, I take occasion to remark upon the faithful and untiring devotion which the Sanatory Committee and my medical *confreres* have evinced in the discharge of the very responsible duties imposed upon them, and finally tender to them my sincere acknowledgments for the uniform confidence and courtesy extended to me during the period of our official connection.

SETH GEER, M. D.,  
*Resident Physician.*

New York, September, 1849.

NO. II.

REPORT OF PROFESSOR W. H. ELLET,

*On the analysis of the atmosphere, in the City of New York, during the Cholera  
in 1849.*

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*The Honorable the Sanatory Committee  
of the Board of Health :*

GENTLEMEN :—I have the honor to report to you the result of the experiments in which I have recently been engaged on the atmosphere of this city. The object which I had in view was to determine whether the air contained in due proportion those substances which constitute a normal atmosphere, and more especially to ascertain whether any foreign matter could be discovered which might be looked upon as the cause of the prevailing epidemic.

The observations of Dr. PROUT, made in London in the year 1832, seemed to indicate the presence of a foreign body in the atmosphere at that time and place—presenting itself simultaneously with the appearance, and continuing throughout the duration of the cholera in that year. Assuming the correctness of Dr. PROUT's experiments, and that the existence of the same disease amongst us at the present time would be probably attended with a similar change in the condition of the atmosphere, it seemed desirable to institute rigorous experiments upon the subject. I

therefore determined to submit large masses of air to such processes as would be calculated to insulate from it, and present in a separate form, or in new states of combination, any foreign body which it might contain. It was evident from the wide extension of the epidemic, that its cause—supposing it to be atmospheric—was to be sought in the general atmosphere of the city, rather than in those limited localities where its high degree of virulence indicated more of *exciting* than of *predisposing* agencies.

This consideration, together with others of personal convenience, induced me to select as the place of experiment, the laboratory of the College of Physicians and Surgeons, in Crosby, near Spring street. Here Prof. TORREY, presented me many facilities which I could not elsewhere have enjoyed. The situation is a central one in the city; there is nothing in the neighborhood tending to contaminate the atmosphere, and but few cases of cholera have occurred in its immediate vicinity.

Two sets of experiments were commenced on the 11th day of July. The design of the first was to separate by a cold of 32°F. whatever substances might be condensable from the air at that temperature; and of the other to subject it in considerable masses to various chemical agencies suitably selected.

Although the results of these experiments have been entirely *negative*—indicating so far as they go, the presence of no foreign matter in the atmosphere which could be regarded as the source of disease, I deem it proper to describe the modes by which they have been reached, if for no other purpose than the information of future investigators who may engage in a similar research.

The arrangement adopted for obtaining condensable products from the air, though novel, was simple and efficacious. A tube of large bore coming from the external air, at a height of about five feet from the surface of the ground, was connected with one of the necks of a large Wolfe's bottle—a similar tube passing from the other neck, being tightly fitted into an aperture in the flue of an air furnace, having a good draught. It was found that with this arrangement, when a moderate fire was kindred in the furnace, a powerful draught of the external air was *solicited* through the apparatus, and continued active for at least twenty-four hours after the fire had burned out. The Wolfe's bottle was kept constantly surrounded by ice; a fire was built every morning in the furnace; and the operation was continued day and night for nearly a fortnight.

Large quantities of liquid matter were of course condensed; and these were drawn off from time to time, and submitted to chemical examination. The liquid was found to have the sensible qualities of a richly aerated water. After allowing the minute quantity of dust which had been mechanically introduced with the current of air, to subside, it was perfectly transparent, and destitute of taste and odor. It exhibited no decided acid or alkaline reaction to test-papers, although more delicate reagents showed the presence of carbonic acid. Traces also of chlorine—probably in the state of chloride of sodium, which is generally present in the atmosphere near the sea—and of ammonia, were also detected; but their quantities were too small for accurate determination with the means at my disposal.



Portions of the clear liquid were also tested with suitable reagents, for the purpose of determining the presence of organic matter. This was found, but in quantities apparently not greater than is usual in rain water that has fallen through the atmosphere of a city in warm weather.

Both the clear liquid, and its sedimentary deposit were subjected to rigorous microscopic examination, both by myself and by Mr. FREY, whose expertness in such researches is well known; but no appearance of organized beings, either animal or vegetable was observed.

For the purpose of determining whether any foreign substance could be separated from the air by purely chemical agents, I employed as an aspirator for drawing it through them, a gas holder containing about sixty gallons. The aspirator having been filled previous to each experiment with water, and the discharge of the latter being so adjusted as to occupy from twenty-four to thirty-six hours, a current of air was slowly drawn through the liquids employed, which were contained in a series of Wolfe's bottles, arranged with delivering tubes drawn to capillary orifices.

The liquids through which the air was passed in the successive experiments, were solutions of iodide of potassium in starch water; of basic, neutral and acid acetates of lead; of nitrate of lead; of nitrate of silver; of baryta; of potassa; of hydrochloric acid; and of the chlorides of gold and of platinum. Without entering into unnecessary detail, I may state that these experiments afforded results of the same general character with those obtained by the examination of the liquid procured by refrigeration. Hy-

drosulphuric acid could not be detected. Carbonic acid, chlorine, ammonia, and organic matter were found in varying, but never in sufficient quantities to justify a suspicion that they could affect the salubrity of the atmosphere which contained them.

Repeated eudiometrical analysis of the air were also performed by means of an apparatus capable of affording much more accurate results than the instruments generally employed for the purpose. The average of twelve experiments gave in the hundred parts by measure, 20.421 parts of oxygen, and 79.579 of nitrogen. These numbers approximate very closely to those obtained some years since by Dr. HARE, at Philadelphia, and indicate no departure from the normal constitution of the atmosphere.

At an early period of the prevalence of the epidemic, the public attention was much directed to a peculiar principle called "ozone," which was asserted to be present in the air, and to be a probable cause of the pestilence. Several persons exhibited the results of experiments which they considered as proving its presence ; and certain chemical relations supposed to characterize it were made the basis of modes of treating the disease, which were announced as having proved eminently successful. I deemed it therefore my duty to institute numerous and cautious experiments to ascertain whether there was any substance present in the air capable of producing the chemical effects attributed to "ozone." In the course of this investigation, whose details are foreign to the object of this report, but will be made public through some scientific journal, I was forced to the conclusion not only that no such

peculiar principle or condition existed in the atmosphere at the time; but that the experiments of those European chemists who have announced the production by artificial means, of such a new form of matter, or such a modified or "allotropic" condition of any of those forms previously known to us, are unsatisfactory.

I have the honor to be,  
Gentlemen, very respectfully  
Your obedient servant,

WILLIAM H. ELLET.

New York, Sept. 18, 1849.

No III.

## CENTRE and THIRTY-FIFTH STREET HOSPITALS.

No. 1.—CENTRE STREET HOSPITAL.

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NEW YORK, 26th September, 1849.

*To the Sanatory Committee of the Board of Health :*

GENTLEMEN :—The undersigned, late Physician to the CENTRE STREET AND THIRTY-FIFTH STREET CHOLERA HOSPITALS, has the honor to submit the following

### REPORT :

That on the 17th day of May, 1849, it was ascertained beyond question, that the disease which had for several days existed in the rear of No. 20 Orange street, was none other than the ASIATIC CHOLERA. Seven patients were on that day removed thence, by order of the Board of Health, to the building, 127 Anthony street. This building was a kind of store-house, or packing-house for meat, entirely unfit for hospital purposes, and used as a mere temporary receptacle. Four of the seven patients died on the night of the 17th. The three survivors were removed on the 18th, to the building afterwards known as the CENTRE STREET CHOLERA HOSPITAL.

This building, commonly designated by the name of Monroe Hall, was occupied as a public house or tavern. It stands on the north-west corner of Centre and Pearl

streets, in the Sixth Ward of the City of New York. It has two fronts, one of sixty feet, on Centre street, another of forty feet, on Pearl street. The Centre street front looks towards the east—the Pearl street front towards the south. The ground on which it stands is low, being a part of what was formerly known as the Collect. From Broadway, which runs parallel to Centre street, and about two hundred yards further west, there is a gradual descent towards Centre street, of thirty or forty feet. The “Five Points” lie in a north-easterly direction, distant two hundred yards. No. 20 Orange street, the starting point of the epidemic, is within fifty feet of the “Five Points.”

Monroe Hall is a building of three stories, besides an attic and basement story. The basement was occupied as an eating house and refectory. The first floor was a porter house or tavern. The second floor was fitted up as a kind of theatre, and used for exhibitions of “Model Artists,” and the like. The third floor was a drill room for military companies. The attic was divided into small apartments, which were occupied as tenements, by a number of families. These families, as may be supposed, were not long, after the first patients were brought, in effecting their escape from the premises, with their moveable effects.

The third floor was the only portion of the building which, for the first thirty days, was occupied for the reception and treatment of patients. The apartments in the attic were used for culinary purposes, and for eating and lodging rooms for the attendants.

In proceeding to give, in some detail, the numerical results of treatment in Centre street hospital, I deem it



proper to consider them in two periods. During the first, the patients were all confined to the third floor. During the second, they enjoyed the benefit consequent upon the more spacious accommodations obtained by the opening of the second floor.

The whole number of names entered upon the Register of Centre street hospital, while under my care, is four hundred and ninety-two. Of these, two were dead when brought in. Twenty-one others were dying. Deducting these, there are left four hundred and sixty-nine persons who were subjects of treatment.

*First period, commencing 17th of May, ending 16th of June, 30 days.*

|                 |                      |
|-----------------|----------------------|
| Admissions..... | 159                  |
| Deaths.....     | 97 or 61.9 per cent. |
| Cures.....      | 62 “ 38.1 “          |

*Second period, commencing 16th June, ending 5th August, 52 days.*

|                 |                       |
|-----------------|-----------------------|
| Admissions..... | 310                   |
| Deaths.....     | 146 or 47.1 per cent. |
| Cures.....      | 164 “ 52.9 “          |

Showing a difference of about fifteen per cent. in favor of the second period—leading us to the fair inference, that as the medical treatment was precisely the same, about fourteen or fifteen in the hundred fell a sacrifice to the crowded and insufficient accommodations of the first period.

The following is a statement of the comparative mortality, in *each stage* of the disease, during the two periods :

|                                 |                  |            |
|---------------------------------|------------------|------------|
| First period—first stage—Deaths | 19 pr. ct.—Cures | 81 pr. ct. |
| Second “ — “ “ — “              | 16 “ — “         | 84 “       |
| First “ —collapse stage—Deaths  | 82.4 per cent.   |            |
| “ “ “ “ —Cures                  | 17.6 “ “         |            |
| Second “ “ “ —Deaths            | 65.6 “ “         |            |
| “ “ “ “ —Cures                  | 34.4 “ “         |            |

Showing a greater difference in the collapse, or most severe stages, than in the milder ones of the first stage.

|                                      |                |  |
|--------------------------------------|----------------|--|
| First period—partial collapse—Deaths | 48.4 per cent. |  |
| “ “ “ “ Cures                        | 51.6 “ “       |  |
| Second “ “ “ Deaths                  | 43.0 “ “       |  |
| “ “ “ “ Cures                        | 57.0 “ “       |  |

Showing still a decided difference in favor of the second period.

A comparison of the results of treatment in the different stages, shows very forcibly the importance of prompt attention to the first symptoms. Thus, in the *first* stage of the disease, the *cures* range from eighty-one to eighty-four per cent., the *deaths* from sixteen to nineteen, while in the *collapse* stage the *cures* range from seventeen to thirty-four per cent., the *deaths* from sixty-five to eighty-two per cent.

The following is a statement of the number admitted in each stage of the disease, out of the whole number of patients :

|                        |     |
|------------------------|-----|
| First stage.....       | 122 |
| Partial collapse.....  | 146 |
| Complete collapse..... | 195 |
| Moribund.....          | 21  |
| Consecutive fever..... | 6   |

## SEX OF PATIENTS.

Males.....234 | Females .....258

Average duration of previous diarrhœa, in four hundred and sixty-nine cases—three days and six hours.

Average time in hospital, in four hundred and eighty-three cases—two days and eight hours.

Table of ages of patients, and comparative mortality.

| AGE.                              | DIED | CURED | TOTAL |
|-----------------------------------|------|-------|-------|
| Birth to one year.....            | 2    | ..... | 2     |
| One year to five years.....       | 6    | 7     | 13    |
| Five years to ten years.....      | 3    | 3     | 6     |
| Ten years to twenty years.....    | 15   | 17    | 32    |
| Twenty years to thirty years..... | 67   | 69    | 136   |
| Thirty years to forty years.....  | 80   | 63    | 143   |
| Forty years to fifty years.....   | 66   | 35    | 101   |
| Fifty years to sixty years.....   | 22   | 18    | 40    |
| Sixty years to seventy years..... | 6    | 4     | 10    |

## OCCUPATIONS IN 224 CASES :

|                     |   |                      |    |
|---------------------|---|----------------------|----|
| Blacksmiths .....   | 8 | Oystermen.....       | 2  |
| Boatmen.....        | 5 | Oakum pickers.....   | 2  |
| Butchers.....       | 2 | Players.....         | 2  |
| Bookbinder.....     | 1 | Painters.....        | 6  |
| Barber.....         | 1 | Pressmaker .....     | 1  |
| Carpenters.....     | 6 | Paper hanger .....   | 1  |
| Clerks.....         | 3 | Pedlars.....         | 2  |
| Cooks.....          | 5 | Quarryman.....       | 1  |
| Cartmen.....        | 2 | Shoemaker.....       | 1  |
| Cabinet makers..... | 2 | Sailors .....        | 28 |
| Cap maker.....      | 1 | Servants.....        | 26 |
| Coachman.....       | 1 | Ship carpenters..... | 6  |

|                 |    |                    |       |
|-----------------|----|--------------------|-------|
| Druggist.....   | 1  | Sail makers.....   | 1     |
| Engineers ..... | 3  | Seamstresses ..... | 4     |
| Farmers.....    | 2  | Stone cutters..... | 3     |
| Foundryman..... | 1  | Tailors.....       | 5     |
| Glazier.....    | 1  | Tin smiths.....    | 6     |
| Hatters .....   | 2  | Teachers .....     | 3     |
| Hostler.....    | 1  | Tailoresses.....   | 2     |
| Laborers.....   | 51 | Watch makers.....  | 2     |
| Land agent..... | 1  | Washerwomen.....   | 6     |
| Lawyer .....    | 1  | Wool picker .....  | 1     |
| Masons.....     | 4  | White washer.....  | 1     |
| Machinists..... | 2  | Weaver .....       | 1     |
| Nurses .....    | 4  |                    |       |
|                 |    |                    | <hr/> |
|                 |    |                    | 224   |

## NATIVITIES IN 457 CASES :

|                    |     |                        |       |
|--------------------|-----|------------------------|-------|
| England .....      | 30  | France.....            | 2     |
| Germany.....       | 27  | British Provinces..... | 4     |
| Ireland .....      | 252 | Sweden .....           | 1     |
| Scotland.....      | 5   | Poland.....            | 1     |
| United States..... | 135 |                        |       |
|                    |     |                        | <hr/> |
|                    |     |                        | 457   |

## HABITS IN 269 CASES :

|                        |    |                  |       |
|------------------------|----|------------------|-------|
| Temperate.....         | 80 | Intemperate..... | 151   |
| Habitual Drinkers..... | 38 |                  |       |
|                        |    |                  | <hr/> |
|                        |    |                  | 269   |

## No. 2.—THIRTY-FIFTH STREET HOSPITAL.

DURING a portion of the epidemic, the disease raged with fearful mortality in the Sixteenth Ward, lying in the north-west section of the city, between Fifth avenue and the North river. On the 27th July, the undersigned received orders from the Sanatory Committee to open an additional hospital in the public school in Thirty-fifth street, between Eighth and Ninth avenues, and to transfer thither, as soon as possible, the medical staff, nurses, attendants, and hospital equipage of Centre street hospital. This was effected without delay, and on the 29th of July five patients were admitted.

The public school in Thirty-fifth street has an elevated and airy position, overlooking the adjacent portions of the city. The neighborhood is as yet rather sparsely populated. There are a great many pits and pools of stagnant water, from which, and from the bone-boiling and similar establishments, very offensive effluvia emanate. Numerous rag pickers and bone collectors, principally German, inhabit this section of the city. The personal and domestic habits of these people, are well known to be filthy in the extreme. There is also a numerous Irish population. These two classes furnished nearly all the patients.

The force of the epidemic had considerably abated before the hospital was opened.

|                                          |                |
|------------------------------------------|----------------|
| The whole number treated was 119—of whom |                |
| Died.....65                              | Males.....66   |
| Recovered.....54                         | Females.....53 |



|                                 |       |
|---------------------------------|-------|
| Admissions in first stage,..... | 42    |
| “ partial collapse,.....        | 29    |
| “ complete “ .....              | 41    |
| “ consecutive fever,.....       | 7—119 |

Of those admitted in first stage...Died, 7, or 16.6 per ct.  
Cured, 35, or 83.4 “

Of those in partial collapse.....Died, 16, or 55.6 “  
Cured, 13, or 44.4 “

Of those in complete collapse....Died, 36, or 87.8 “  
Cured, 5, or 12.2 “

Of those in consecutive fever....Died, 5, or 71.5 “  
Cured, 2, or 28.5 “

**Table of ages of patients, with the mortality of each age.**

| AGE.                               | DIED. | CURED | TOTAL |
|------------------------------------|-------|-------|-------|
| Birth to one year.....             |       |       |       |
| One year to five years.....        | 3     | 4     | 7     |
| Five years to ten years.....       | 5     | 6     | 11    |
| Ten years to twenty years.....     | 4     | 8     | 12    |
| Twenty years to thirty years.....  | 15    | 15    | 30    |
| Thirty years to forty years.....   | 22    | 15    | 37    |
| Forty years to fifty years.....    | 9     | 2     | 11    |
| Fifty years to sixty years.....    | 3     | 3     | 6     |
| Sixty years to seventy years.....  | 3     | ..... | 3     |
| Seventy years to eighty years..... | 1     | ..... | 1     |

#### OCCUPATION.

|                 |   |                  |   |
|-----------------|---|------------------|---|
| Artist .....    | 1 | File-cutter..... | 1 |
| Butcher .....   | 1 | Gardiner .....   | 1 |
| Barber .....    | 1 | Grocer .....     | 1 |
| Boatman .....   | 1 | Laborer .....    | 1 |
| Baker.....      | 1 | Mason .....      | 1 |
| Carpenter ..... | 1 | Nurses .....     | 2 |

|                     |   |                    |    |
|---------------------|---|--------------------|----|
| Cooks.....          | 3 | Painters .....     | 2  |
| Cooper.....         | 1 | Porters .....      | 2  |
| Clerk .....         | 1 | Pedler .....       | 1  |
| Cap-maker .....     | 1 | Plasterer .....    | 1  |
| Cartmen .....       | 5 | Stone-cutter ..... | 1  |
| Cabinet-maker ..... | 1 | Servants .....     | 79 |
| Ciger-maker .....   | 1 | Tailor.....        | 1  |
| Confectioner.....   | 1 | Washerwomen .....  | 4  |
| Dyer.....           | 1 | Weavers.....       | 2  |

## NATIVITY.

|                     |    |                         |   |
|---------------------|----|-------------------------|---|
| United States ..... | 21 | Scotland .....          | 1 |
| England .....       | 8  | British Provinces ..... | 2 |
| Germany.....        | 26 | Norway .....            | 1 |
| Ireland .....       | 34 | France .....            | 1 |

## CONCLUDING REMARKS AND OBSERVATIONS.

## 1. CHARACTER AND DESCRIPTION OF THE DISEASE.

No points of difference were observed between the present and former epidemics of cholera in this city—nor between it and the recorded description of the disease in other places. The well known diagnostic symptoms of Asiatic cholera were fully and strongly developed. The vomiting and purging of the rice color fluid, the hoarse whispering voice, cramps, cyanosis, asphyxia, and suppression of all the secretions, which marked the great majority of the cases, pronounced in unmistakable language the character of the disease. During the earlier stages of the epidemic, there were not wanting those who questioned its identity with the Asiatic cholera; or at least imagined that it existed in a modified and milder form. Long before its close, it is believed that the most skeptical ceased to entertain any doubt on the subject.

## 2. CONTAGIOUS OR NON-CONTAGIOUS CHARACTER OF THE DISEASE.

That the cholera of the present season originated, *de novo*, at 20 Orange street, scarcely admits a question. No connection, mediate or immediate, by persons or things, has been traced or alledged to exist between the disease prevailing at 20 Orange street and any similar disease, in any other locality. In that place all the predisposing causes were existing in the utmost intensity, and on that

spot the epidemic selected its first victims. But did the subsequent history of the disease exhibit any evidence of contagion? The writer of this report answers unhesitatingly in the negative. The convictions of his own mind, deduced from a close and impartial observation of facts bearing on this point, are complete. The admitted fact that a number of nurses and attendants in the hospitals under his charge, contracted the disease, and several fell victims to its violence, does not impair in the least degree the force of this conviction. These persons, in common with the whole population, were under the full operation of the epidemic influence. Superadded to this, they were subjected to many of the strongest predisposing causes. The great majority were intemperate persons. Add to this the laborious and exhausting nature of their duties—being on watch the whole of every second night—and it can, as it seems to me, be a matter of no surprise, nor require the supposition of contagion, that eight or ten, out of forty or fifty persons, employed during the epidemic, should have contracted the disease. Of eight individuals, who were at different times attached to the medical staff of the two hospitals, not one suffered an attack. The most of us enjoyed uninterrupted health from first to last.

### 3. THERAPEUTIC TREATMENT. \*

Entertaining the strong conviction, that the profuse and exhausting diarrhœa is the essential feature of the disease, upon which all the concurrent and subsequent phenomena, directly or indirectly hinge, our indications of cure were deduced from this conviction—our first efforts directed to arrest the evacuations. In our efforts to accomplish this point, we did not lose sight of the co-existent fact, that all

the important secretions of the system were arrested—all the great secretory organs smitten, as it were, with paralysis. With remedies to check the diarrhœa, were combined those calculated to restore the secretions. These are the two indications of cure.

To accomplish the first, opium, in its different forms, is probably the most efficient single remedy. It was administered both by the mouth and rectum, and with great efficiency and success. It is, however, obnoxious to the objection, that while it checks diarrhœa more effectually than any other remedy, it also impedes the restoration of the secretions. Despite this objection, I regard its use as indispensable. Combined with opium, and to subserve a similar end, camphor was extensively administered, and with excellent results. The solution of camphor in chloroform, affords a happy and efficient mode of administration—superior, it is believed, in some respects, to any other form.

In addition to these two remedies, and in combination with them, the vegetable and mineral astringents, of every form and variety, were extensively used.

Tannin, pure, or in the various drugs of which it constitutes the active principle—acetate of lead, nitrate of silver, sulphates of zinc, alumina and copper, were all used, and with happy effects. The combination of opium and acetate of lead, swallowed, or thrown into the rectum, forms a remedy of singular, and, I think, unsurpassed efficiency.

To accomplish the other leading indications, viz: to restore the suppressed secretions, calomel was, in the great



majority of cases, administered, in combination with opium and astringents.

In doses of from one to five grs., (the latter dose not often repeated,) it is believed to have been efficacious. The blue pill was sometimes substituted, or alternated, with similar results, but with perhaps less efficacy.

In the early part of the epidemic, we placed a sufficient number of patients to afford, as was thought, a fair test, under treatment, with large doses, say thirty grs. of calomel, uncombined with opium. In our hands this treatment proved an entire failure. The progress of the symptoms did not appear in the slightest degree to be arrested, or even retarded. The treatment was therefore abandoned.

In addition to the use of mercury, designed principally to act on the biliary secretion, remedies were also directed to restore the action of the kidneys and the flow of the urine. The two principally relied on were the sesquichlorid (muriated tincture) of iron, and the sweet spirits of nitre. They certainly appeared to act with much success in restoring the urinary secretion, and giving relief to the brain in the secondary or consecutive form of the disease. The tinct. mur. fer. was administered in doses of fifteen to twenty drops, combined or not with half teaspoonful doses of spirits nitre, and repeated every two or four hours.

If the diarrhœa which ushers in the attack, has continued unchecked for a period of time, more or less extensive, varying in different individuals, from less than an hour to many hours, or even days, we arrive at that stage of the disease, and that peculiar condition, to

which the term collapse has been applied. Collapse may be *partial* or it may be *complete*.

It has been seen in the former part of this report, that a considerable majority of all the cases treated were in partial or complete collapse. It has also been observed that a very large proportion had a fatal result.

What is the condition of a patient in collapse, and what the indications of cure? The blood of such a patient has, by the profuse serous, and watery evacuations, been almost deprived of its fluidity, and rendered incapable of circulation in the minute vessels. It has become loaded with urea, carbonaceous matters, and other materials, which in a state of health are constantly eliminated, and whose removal is indispensable. The vital energy of the system has become exhausted by the profuse discharges, and the violence of the spasmodic muscular action. The animal heat, ordinarily produced by the oxygenation of the blood, has ceased to be furnished; the patient cold and pulseless, is almost the same as a corpse.

The indications plainly are to restore to the system vital energy, warmth, and fluidity, to return to the blood that of which it has been robbed. The means to accomplish these are unhappily little in our power. Dr. Stevens, of St. Thomas, aimed to do so by administering his saline solution. Unfortunately it cannot pass into the circulation, because the stomach instantly rejects it. The injection of the saline fluid immediately into the veins has met with no better success. We cannot do the work of nature's laboratory by any such bungling substitutes. We attempt to restore the vital warmth by the application of heat in

various ways to the surface, and to the extremities. Vain attempt! As well might we hope to warm a frozen lake by a fire kindled upon the ice which covers its surface.

We have another object to accomplish, in this as in all the stages of the disease: to alleviate by every proper means the patient's sufferings, which in collapse are often excruciating, is an indispensable duty. The cramps and spasms continue with fearful violence and severity. The thirst is often tormenting and agonizing. The anasthasia produced by the chloroform inhalation sometimes comes in here very happily, and seldom fails to furnish the patient some temporary relief to his sufferings; that, however, is all.

The attempt to arouse the vital energy by diffusible stimuli, alcohol and ammonia, was generally made, but with very little avail. These agents may goad on the circulation for a while, but they contribute nothing towards the restoration of health. They even do harm, by loading the blood, already too highly carbonated, with still more of carbonaceous material. In the case of inebriates, who frequently came in after a debauch of several days, with their blood and brains loaded with alcohol, these remedies appeared to do actual injury, and to hasten the fatal termination.

In the remarks made upon the futility, in a majority of cases of collapse, of the attempts to restore warmth to the system, by the application of external and artificial heat, it is not intended to throw any discredit upon the propriety and frequent utility of this remedy.

In the earlier stages of the disease warm applications are of great utility, and most comforting to the patient. A variety of methods were tried, but the dry heat produced by the application of warm water in india rubber bottles and bags was found the most convenient and manageable, and most agreeable to the patients.

The cholera patient who survives the first stage of the disease, and lives through the dangers of collapse, has yet to encounter other perils, perhaps quite as formidable. The SECONDARY or CONSECUTIVE FEVER often lies between him and restoration to health. The symptoms of this stage assume a variety of forms. Sometimes they are of a typhous character. Not unfrequently they bear a marked resemblance to the congestive fevers of the Southern States. The pathological condition appears to depend, in a great measure, upon the depraved condition of the blood, produced by the causes already described. Strongly marked cerebral congestion was one of the most frequent accompaniments.

The *treatment* consisted in the application of cups and blisters to the temples, and back of the neck. Counter irritants to the extremities. Internally, mercurials and diuretics were administered with good effects, to restore the bilious and urinary secretions.

This stage of the disease, as indeed was true of every other stage, proved most fatal to those who had been addicted to the free use of alcoholic stimulants. This class, if they survived the earlier stages, very uniformly ran into consecutive fever, and most generally succumbed under it.

## 4. POST MORTEM APPEARANCES.

Numerous examinations were made of every stage of the disease. A detailed description of the post mortem appearances will not be expected on the present occasion.

It is sufficient to observe, briefly, that those dead in collapse presented an engorged condition of the abdominal viscera, and the mucous surfaces. The vessels were distended, as though all the blood of the body had rushed in this direction.

Those who died in the consecutive fever, exhibited strongly marked appearances of congestion of the brain and spinal marrow, with more or less effusion into the different cavities.

In many rabid cases, the examination revealed very slight departures from a perfectly healthy condition, and would have rendered it very difficult, from a mere inspection of the post mortem appearances, to form even a conjecture as to the cause of death.

The undersigned cannot conclude this report, without rendering a merited tribute to those gentlemen who were associated with him in the medical staff of the hospitals, and who ably and zealously seconded all his efforts. To Messrs. H. N. WHITTELSEY and THOMAS M. FRANKLIN, First Assistant Physicians, and to Messrs. EDWIN B. STIMSON, H. M. LYONS and CHARLES KENWORTHY, Second Assistants, his thanks are sincerely tendered.

Respectfully submitted,

WILLIAM P. BUEL, M. D.,  
*Late Physician Centre street and Thirty-  
 fifth street Cholera Hospitals.*



NO. IV.

WILLIAM AND CENTRE STREET HOSPITALS.

No. 1.—WILLIAM STREET.

NEW YORK, October 1st, 1849.

*To the Sanatory Committee :*

GENTLEMEN :—The hospital in William street, Public School house No. 1, was opened to the reception of patients on the 9th of June, and was closed on the 27th of August. During that time, 712 were admitted; in June 148, in July 333, in August 231. Of this number, 390 were males, and 322 were females. The following tables exhibit the number of persons received, deceased, and discharged cured; the disease and condition; the sex; the occupation; the age; the residence; the nativity; the color, and per centage of each.

| STAGE<br>AND<br>CONDITION. | ADMITTED. |      | DIED. |      | DISCHARG. |      | TOTAL. |       |       | PER CENTAGE. |       |
|----------------------------|-----------|------|-------|------|-----------|------|--------|-------|-------|--------------|-------|
|                            | MALE      | FEM. | MALE  | FEM. | MALE      | FEM. | ADM.   | DIED. | DISC. | DIED.        | DISC. |
| First Stage.               | 73        | 56   | 2     | 4    | 71        | 52   | 129    | 6     | 123   | 4.65         | 95.35 |
| Par. Col. . .              | 132       | 111  | 50    | 40   | 82        | 71   | 243    | 90    | 153   | 37.04        | 62.96 |
| Collapse. . .              | 141       | 124  | 133   | 114  | 9         | 9    | 265    | 247   | 18    | 93.20        | 6.80  |
| Dead & dy'g                | 31        | 16   | —     | —    | —         | —    | 47     | 47    | —     | 100.00       | 0.00  |
| Other dis.                 | 13        | 15   | 8     | 10   | 5         | 5    | 28     | 18    | 10    | 64.38        | 35.62 |
|                            | 390       | 322  | 193   | 168  | 167       | 137  | 712    | 408   | 304   | 57.30        | 42.70 |

Whole number of cases of cholera 637, of which 343 died, 195, independent of the dead and dying, and other

diseases, within twelve hours after admission. Per centage 53.84. Exclusive of the 265 collapsed or pulseless patients, per centage 25.80. With premonitory diarrhœa there were 514; without it 50; unknown 73.

It may be well to add that 35 cases are included under the head of cholera which reacted and died with delirium tremens and consecutive fever. In all, the habits of the persons were intemperate, and their constitutions very much impaired by long continued dissipation.

| OCCUPATION OF MALES. |     | pr. et. | OCCUPATION OF MALES.        |    | pr. et. |
|----------------------|-----|---------|-----------------------------|----|---------|
| Laborers.....        | 136 | 34.87   | Musician.....               | 1  | 0.25    |
| Mariners.....        | 67  | 17.18   | Clockmaker.....             | 1  | 0.25    |
| Clerks.....          | 14  | 3.59    | Sashmaker.....              | 1  | 0.25    |
| Shoemakers.....      | 8   | 2.05    | Painter.....                | 1  | 0.25    |
| Carpenters.....      | 11  | 2.82    | Broker.....                 | 1  | 0.25    |
| Brickmasons.....     | 10  | 2.56    | Tanner.....                 | 1  | 0.25    |
| Farmers.....         | 8   | 2.05    | Locksmith.....              | 1  | 0.25    |
| Porters.....         | 5   | 1.28    | Fisherman.....              | 1  | 0.25    |
| Mechanics.....       | 5   | 1.28    | Weaver.....                 | 1  | 0.25    |
| Blacksmiths.....     | 5   | 1.28    | Tracklayer.....             | 1  | 0.25    |
| Tailors.....         | 5   | 1.28    | Umbrella maker.....         | 1  | 0.25    |
| Cartmen.....         | 4   | 1.02    | Ropemaker.....              | 1  | 0.25    |
| Printers.....        | 3   | 0.77    | Engraver.....               | 1  | 0.25    |
| Pedlars.....         | 3   | 0.77    | Bookgilder.....             | 1  | 0.25    |
| Cooks.....           | 4   | 1.02    | Bookbinder.....             | 1  | 0.25    |
| Booksellers.....     | 2   | 0.51    | Coachmaker.....             | 1  | 0.25    |
| Merchants.....       | 2   | 0.51    | Surgeon and Apothecary..... | 1  | 0.25    |
| Servants.....        | 2   | 0.51    | Physician.....              | 1  | 0.25    |
| Barbers.....         | 2   | 0.51    | Marketer.....               | 1  | 0.25    |
| Engineers.....       | 2   | 0.51    | Saddler.....                | 1  | 0.25    |
| Brass-finishers..... | 2   | 0.51    | Butcher.....                | 1  | 0.25    |
| Bar-keepers.....     | 2   | 0.51    | Farrier.....                | 1  | 0.25    |
| Sailmakers.....      | 2   | 0.51    | Nurse.....                  | 1  | 0.25    |
| Trav. Agents.....    | 2   | 0.51    | Tinsmith.....               | 1  | 0.25    |
| Chairmakers.....     | 2   | 0.51    | Artf. Toothmaker.....       | 1  | 0.25    |
| Bakers.....          | 2   | 0.51    | Goldbeater.....             | 1  | 0.25    |
| Segarmakers.....     | 2   | 0.51    | Sugar-refiner.....          | 1  | 0.25    |
| Stewards.....        | 2   | 0.51    | Marble-polisher.....        | 1  | 0.25    |
| Stonemasons.....     | 2   | 0.51    | School-master.....          | 1  | 0.25    |
| Ropemakers.....      | 2   | 0.51    | Piper.....                  | 1  | 0.25    |
| Grocer.....          | 1   | 0.25    | Coppersmith.....            | 1  | 0.25    |
| Matmaker.....        | 1   | 0.25    | Unknown.....                | 38 | 9.74    |
| Hostler.....         | 1   | 0.25    | Total.....390               |    |         |

The females (322) were either married or servants, or had no particular avocation.

| AGES OF PERSONS WITH<br>CHOLERA. | ADMIT'D. |      | DIED.  |      | DISCH'D. |      | TOTAL. |       |       | PER CENT. |       |
|----------------------------------|----------|------|--------|------|----------|------|--------|-------|-------|-----------|-------|
|                                  | Males.   | Fem. | Males. | Fem. | Males.   | Fem. | Admt   | Died. | Dis'd | Died.     | Dis'd |
| From 1 to 10 years. ....         | 9        | 6    | 3      | 3    | 6        | 3    | 15     | 6     | 9     | 40.00     | 60.00 |
| “ 10 to 20 “ .....               | 30       | 36   | 11     | 12   | 19       | 24   | 66     | 23    | 43    | 34.85     | 63.15 |
| “ 20 to 40 “ .....               | 228      | 187  | 120    | 102  | 108      | 85   | 415    | 222   | 193   | 53.49     | 46.51 |
| “ 40 to 60 “ .....               | 65       | 49   | 45     | 32   | 20       | 17   | 114    | 77    | 37    | 67.54     | 32.46 |
| Over 60 “ .....                  | 11       | 8    | 7      | 6    | 4        | 2    | 19     | 13    | 6     | 68.42     | 31.58 |
| Unknown.....                     | 8        | .... | 2      | .... | 6        | .... | 8      | 2     | 6     | 25.00     | 75.00 |
|                                  | 351      | 286  | 188    | 155  | 163      | 131  | 637    | 343   | 294   | 53.84     | 46.16 |

| NUMBER FROM EACH WARD. |     | pr. ct. | NUMBER FROM EACH WARD. |    | pr. ct. |
|------------------------|-----|---------|------------------------|----|---------|
| 1st Ward.....          | 88  | 12.36   | 12th Ward.....         | 7  | 0.98    |
| 2d “ .....             | 17  | 2.39    | 13th “ .....           | 18 | 2.53    |
| 3d “ .....             | 10  | 1.40    | 14th “ .....           | 31 | 4.35    |
| 4th “ .....            | 183 | 25.70   | 15th “ .....           | 2  | 0.28    |
| 5th “ .....            | 25  | 3.51    | 16th “ .....           | 11 | 1.54    |
| 6th “ .....            | 60  | 8.43    | 17th “ .....           | 14 | 1.97    |
| 7th “ .....            | 44  | 6.18    | 18th “ .....           | 16 | 2.24    |
| 8th “ .....            | 15  | 2.10    | Vessels in port.....   | 46 | 6.44    |
| 9th “ .....            | 3   | 0.42    | Strangers.....         | 44 | 6.18    |
| 10th “ .....           | 23  | 3.23    | Unknown.....           | 35 | 4.91    |
| 11th “ .....           | 30  | 4.21    |                        |    |         |
|                        |     |         | TOTAL.....             |    | 712     |

| NATIVITY.          |     | pr. ct. | NATIVITY.          |    | pr. ct. |
|--------------------|-----|---------|--------------------|----|---------|
| United States..... | 122 | 17.13   | Denmark.....       | 2  | 0.28    |
| Ireland.....       | 428 | 60.11   | Sweden.....        | 5  | 0.70    |
| England.....       | 41  | 5.76    | Holland.....       | 2  | 0.28    |
| Scotland.....      | 9   | 1.26    | New Foundland..... | 1  | 0.14    |
| Wales.....         | 5   | 0.70    | Belgium.....       | 2  | 0.28    |
| Germany.....       | 63  | 8.85    | West Indios.....   | 3  | 0.42    |
| France.....        | 3   | 0.42    | Canada.....        | 3  | 0.42    |
| Portugal.....      | 2   | 0.28    | Nova Scotia.....   | 3  | 0.42    |
| Spain.....         | 2   | 0.28    | Unknown.....       | 14 | 1.96    |
| Prussia.....       | 1   | 0.14    |                    |    |         |
| Norway.....        | 1   | 0.14    | TOTAL.....         |    | 712     |

| COLOR.     |  | Males. | Females. | Total. | Per cent. |
|------------|--|--------|----------|--------|-----------|
| White..... |  | 379    | 311      | 690    | 96.91     |
| Black..... |  | 11     | 11       | 22     | 3.09      |
|            |  | 390    | 322      | 712    |           |

The above summary exhibits the statistics of the institution under my charge, as recorded from day to day in the register.

A detail of the treatment is more suited to the pages of a medical journal, than a document like the present. If any person desires it, the minutes of the transactions of the hospital, placed in the possession of the Board of Health, will afford the information. It may not, however, be out of place to say, that, in my judgment, astringents and purgatives, copiously and promptly administered, are infinitely the best remedies. To tannin and calomel, combined with opium and camphor, I give the decided preference. In the curable stages, I do not doubt that the disease, in most instances, will readily yield to these agents. External applications are useful adjuvants, but they possess little power in themselves. The restoration of the secretory organs, especially the liver, to action, and the arrest of the serous evacuations, appear to be the only indications that offer the least chance to preserve the blood in a sufficiently normal state, for the purposes of circulation, and the continuance of life.

Before leaving the subject, I call the attention of the Committee to the large number admitted in the usually *fatal stage of collapse*; to the number of *dead and dying* when received; to the number with other maladies, previously treated, *in very little better condition*; to the number of cases which terminated fatally, at various periods, within the short space of *twelve hours*; to the absence of all knowledge in relation to the history of patients, and the neglect of physicians to communicate in their certificates the remedial agents administered; to the distance that

many were brought, with a disease in which repose and time are so important; and to their own knowledge of the generally degraded and vitiated condition of individuals who become inmates, by necessity, of a transient public establishment.

To Dr. John M. Lawrence, who vacated the valuable appointment of senior physician of the Bellevue Hospital, to assume the perilous and arduous position of assistant physician to a cholera hospital, I am under very great obligations. His talents and knowledge peculiarly fit him for the position, and his zeal and attention to the sick, at all hours of the twenty-four, entitle him to the confidence and approbation of the authorities of the city.

To Mr. Kellock, superintendent of "out door poor," I am extremely indebted for attention in directing the removal and burial of the dead. His disposition to oblige at a moment's notice, kept the hospital entirely free from the effluvia arising from the rapid decomposition of the bodies.

If any neglect has occurred in the police of the institution, or if any individual was deprived of a single article necessary to comfort, or to restoration to health, with discretionary powers placed at my disposal by the Sanatory Committee, the fault was my own.

With very great respect, yours, &c.,

ALEX. F. VACHE.



## No. 2.—CENTRE STREET HOSPITAL.

NEW YORK, OCTOBER 9th, 1849.

*To the Sanatory Committee :*

GENTLEMEN :—Simultaneous with the close of the hospital in William street, by the Sanatory Committee, with the laudable desire to restore the premises at the earliest period, after the usual summer vacation of the pupils, to the Commissioners of Schools; the well adapted and thoroughly ventilated third and fourth story rooms in the building, previously under the charge of Dr. BUEL, at the corner of Centre and Pearl streets, were re-opened for the reception of patients, in order to meet promptly the exigencies that arose from the continued prevalence of the epidemic in the lower portions of the city.

From the 27th of August to the 3d of October, 65 patients were admitted—in August, 19; in September, 45; in October, 1. 36 were males and 29 were females. The tables denote the maladies, etc., of each.

| STAGE<br>AND<br>CONDITION. | ADMIT'D. |       | DIED.  |       | DISCH'GD |       | TOTAL. |       |         | PER CENTAGE. |         |
|----------------------------|----------|-------|--------|-------|----------|-------|--------|-------|---------|--------------|---------|
|                            | Males.   | Fems. | Males. | Fems. | Males.   | Fems. | Admt.  | Died. | Disch'd | Died.        | Disch'd |
| First stage,.....          | 8        | 9     | ....   | ....  | 8        | 9     | 17     | ....  | 17      | .....        | 100.00  |
| Partial collapse,.....     | 8        | 9     | 3      | 3     | 5        | 6     | 17     | 6     | 11      | 35.29        | 64.71   |
| Collapse,.....             | 10       | 8     | 8      | 7     | 2        | ....  | 18     | 15    | 3       | 83.33        | 16.67   |
| Dead and dying,.....       | 4        | 1     | 4      | 1     | ....     | 1     | 5      | 5     | ....    | 100.00       | .....   |
| Other Diseases,.....       | 6        | 2     | 4      | 1     | 2        | 1     | 8      | 5     | 3       | 62.50        | 37.50   |
| Total,.....                | 36       | 29    | 19     | 12    | 17       | 17    | 65     | 31    | 34      | 47.69        | 52.31   |

Cases of cholera 52, of which 21 died; per centage 40.31. Exclusive of the 18 collapsed or pulseless patients when received; per centage 17.65. Of those included with cholera, who subsequently died with consecutive fever, were males 2, females 3; Total 5. Those who had premonitory diarrhœa were 40; without it, 6; unknown, 6.

| AGE.                    | ADMIT'D. |      | DIED.  |      | DISCH'D. |      | TOTAL. |       |       | PER CENT. |       |
|-------------------------|----------|------|--------|------|----------|------|--------|-------|-------|-----------|-------|
|                         | Males.   | Fem. | Males. | Fem. | Males.   | Fem. | Admit  | Died. | Dis'd | Died.     | Dis'd |
| From 1 to 10 years..... | 1        | 3    | 1      | 1    | ....     | 2    | 4      | 2     | 2     | 50.00     | 50.00 |
| “ 10 to 20 “ .....      | 4        | 8    | 1      | .... | 3        | 8    | 12     | 1     | 11    | 8.33      | 91.67 |
| “ 20 to 40 “ .....      | 17       | 10   | 10     | 5    | 7        | 5    | 27     | 15    | 12    | 55.56     | 44.44 |
| “ 40 to 60 “ .....      | 10       | 7    | 4      | 5    | 6        | 2    | 17     | 9     | 8     | 52.94     | 47.06 |
| Over 60 “ .....         | 4        | 1    | 3      | 1    | 1        | .... | 5      | 4     | 1     | 80.00     | 20.00 |
|                         | 36       | 29   | 19     | 12   | 17       | 17   | 65     | 31    | 34    | 47.69     | 52.31 |

| OCCUPATION OF MALES. |   | pr. et. | OCCUPATION OF MALES.      |   | pr. et. |
|----------------------|---|---------|---------------------------|---|---------|
| Laborers.....        | 6 | 16.67   | Plate maker.....          | 1 | 2.78    |
| Seamen.....          | 7 | 19.44   | Tanner.....               | 1 | 2.78    |
| Farmers.....         | 2 | 5.56    | Custom House Officer..... | 1 | 2.78    |
| Coopers.....         | 2 | 5.56    | Marble Polisher.....      | 1 | 2.78    |
| Mechanics.....       | 2 | 5.56    | Stone Cutter.....         | 1 | 2.78    |
| Printer.....         | 1 | 2.78    | Fisherman.....            | 1 | 2.78    |
| Plasterer.....       | 1 | 2.78    | Watchman.....             | 1 | 2.78    |
| Bar-keepor.....      | 1 | 2.78    | Dyer.....                 | 1 | 2.78    |
| Umbrella maker.....  | 1 | 2.78    | Engineer.....             | 1 | 2.78    |
| Painter.....         | 1 | 2.78    | Unknown.....              | 3 | 8.33    |
|                      |   |         | TOTAL.....                |   | 36      |

| NUMBER FROM EACH WARD. |    | pr. et. | NUMBER FROM EACH WARD. |   | pr. et. |
|------------------------|----|---------|------------------------|---|---------|
| 1st Ward.....          | 10 | 15.38   | 14th Ward.....         | 2 | 3.08    |
| 2d “ .....             | 2  | 3.08    | 15th “ .....           | 1 | 1.54    |
| 3d “ .....             | 4  | 6.16    | 16th “ .....           | 1 | 1.54    |
| 4th “ .....            | 11 | 16.92   | 18th “ .....           | 1 | 1.54    |
| 5th “ .....            | 1  | 1.54    | Vessels in port.....   | 5 | 7.69    |
| 6th “ .....            | 15 | 23.08   | Strangers.....         | 4 | 6.16    |
| 7th “ .....            | 1  | 1.54    | Unknown.....           | 5 | 7.69    |
| 10th “ .....           | 1  | 1.54    |                        |   |         |
| 13th “ .....           | 1  | 1.54    | TOTAL.....             |   | 65      |

| NATIVITY.          |    | pr. et. | NATIVITY.     |    | pr. et. |
|--------------------|----|---------|---------------|----|---------|
| United States..... | 13 | 20.00   | Germany.....  | 4  | 6.16    |
| Ireland.....       | 41 | 63.00   | Portugal..... | 1  | 1.54    |
| England.....       | 5  | 7.69    |               |    |         |
| Scotland.....      | 1  | 1.54    | TOTAL.....    | 65 |         |

| COLOR.     | Males. | Females. | Total. | Per cent. |
|------------|--------|----------|--------|-----------|
| White..... | 36     | 29       | 65     | 100       |
| Black..... |        |          |        |           |
|            | 36     | 29       | 65     |           |

On mature reflection, I have no further remarks to make in reference to the epidemic, than will be found in the report relating to the William street hospital. As a matter of record, it is proper to state, that Dr. Lawrence continued associated with me, and fully confirmed the opinion expressed on that occasion, of his professional ability and personal character. .

In surrendering to you the important position entrusted to my charge, and in severing from you in my official capacity, I cordially thank you for the kindness evinced on every occasion. During the entire period of the fearful crisis, your confidence impelled me to the performance of duty, and your responsibility incited the exertion to protect it from unmerited censure. If I have fulfilled your expectations and realized your desires, the greatest point in my ambition has been achieved, and I retire from the appointment perfectly satisfied with myself.

With very great regard and respect,

I remain your obd't serv't,

ALEX. F. VACHE.

NO. V.

THIRTEENTH STREET HOSPITAL.

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NEW YORK, Sept. 22d, 1849.

JAMES KELLY, ESQ.,

*Chairman of the Sanatory Committee  
of the Board of Health.*

SIR:—In offering a few observations on the disease that called for the establishment of the Thirteenth street Cholera Hospital, recently under our charge, we would first enumerate the general phenomena of the malady as they presented themselves before us during the epidemic; and that they may be stated with greater precision, we will mention them as they occurred—in the premonitory, incipient, partial and complete collapse stages.

The premonitory stage has received the popular term of cholorine.

Languor and lassitude, occasional nausea and vertigo, with co-existing disorder in the bowels, were the prominent symptoms of this stage.

It was at this time that most of the empirical remedies, which attained any popular renown, were most serviceable.

The incipient stage of cholera was attended by frequent evacuations from the bowels that had lost their fœcal

character, denominated "rice water discharges;" the feeling of debility that attended them was great, and the exhaustion extreme. Taking the disease at this point, subsequent symptoms were often prevented, and life preserved by the appropriate treatment of diarrhœa. After the diarrhœa had existed for a longer or shorter space of time, vomiting of almost colorless fluid, peculiar to cholera, commenced, and with it the period we would designate as the partial collapse.

The vomiting was not always full and effectual, consisting rather of apparently unsatisfactory retchings than a complete discharge of the contents of the stomach; though sometimes the discharges were copious—forcibly and freely expelled—simultaneously with the vomiting, sometimes before cramps took place; and the pain that attended them constituted a great part of the sufferings of the patient, who would beg that friction might be applied to the parts affected. In this stage the pulsation became feeble and frequent; the temperature of the skin diminished; the countenance shrunk, livid, or pallid; and the respiration hurried, occasionally checked by spasms of the diaphragm or intercostal muscles.

After several hours, from four to six, eight or ten, the vomiting and spasms began to subside, by occurring at longer intervals, and with less severity. The partial was then succeeded by the stage of complete collapse, denoted by an almost or quite imperceptible pulse; a cold, moist or wet surface; blueness of the skin, most conspicuous in the face and hands, which wore a shrunk and soddened appearance; a moist and cold tongue; and a voice of mingled huskiness and feebleness.



The sources of suffering were a sense of weight and oppression at the precordia, which induced the patient to implore for fresh air, and to seek relief in changing his position.

During this stage the spasms were generally too feeble to cause much pain. The insensibility of the stomach was great—the most powerful stimulants failing to affect it.

The kidneys, in common with the other glands, suspended their secretory functions.

It was in the above almost hopeless state that a majority of those brought to the Thirteenth street Cholera Hospital were admitted, as may be seen by referring to the annexed tables. Reaction commenced whenever, by the powers of the constitution or the remedies employed, there was a subsidence of the cramps, vomiting and diarrhœa, before complete collapse took place. The patient then became calm and composed; the skin of moderate warmth, though somewhat cooler than natural; the pulse emerged to a condition of moderate force, without much acceleration; and the renal secretions returned. When only these symptoms were manifested, the stage of reaction was the last of the disease and the commencement of convalescence. But as I have remarked, the majority of cases that terminated fatally were admitted in a state of complete collapse, from which, if they reacted, it was not unfrequently to pass on to a fever, whose malignancy was proportioned to the severity of the collapse that preceded it.

This fever has been termed consecutive. It appeared after the patient had remained in collapse a longer or

shorter time. Reaction having apparently commenced, the patient would often remain in nearly the same condition for one or two days, without any very definite indication of the organs affected. Subsequently the vessels of the conjunctiva became distended with blood, especially that portion of it covering the inferior hemisphere of the eye. The pulse was more developed, though not frequent—generally not exceeding ninety—accompanied by a tendency to sleep. As the fever progressed, the eye became more and more injected; the intellect more and more torpid; though the patient could still be roused to answer questions, and even to make one or two sensible remarks about his condition; but the instant the conversation ceased, the eyes were turned up in the orbit, exposing through the half-closed lids the red sclerotica, and he fell again in a state of stupor. The countenance was often flushed, sometimes considerably so, yet the temperature of the surface was below the natural standard. The duration of the disease was from six to ten days, often terminating fatally.

Doctor Cullen, in describing the phenomena of fevers, selected the intermittent form, as embracing all the essential symptoms necessary to be known, to enable any person to form a correct idea of the nature of fevers in general.

We, in like manner, have given a description of cholera, embracing all that is necessary to be known, to enable any person to form a right comprehension of the disease. Although every one familiar with the cholera, or its history, well knows that in many cases the disease is ushered in with symptoms so violent, and runs a course so

rapid, as to make it difficult or impossible to recognize any distinct stages.

With reference to the treatment of cholera pursued at the Thirteenth street Cholera Hospital, we would premise our remarks by expressing the conviction, that with the public, (and perhaps in our own profession,) a specific remedy for the disease is too eagerly sought, to the neglect of modifications required by different localities, different epidemics of the malady, and by different periods of the same epidemic.

In cholera as in other diseases,<sup>1</sup> to be successful, the treatment must be adapted to the varying circumstances of the case before us—its severity, the period of its progress; its peculiar phenomena; the age, habits, constitution and occupation of the patient should be duly considered.

Hence the necessity which arises, in describing our medical management, to do so in general, (and to those wishing to follow the same mode of treatment) perhaps, unsatisfactory terms. The premonitory and incipient stages were treated by nearly the same remedies, differing mostly in the energy of their administration.

We deem it unnecessary to mention all the remedial agents used by us. Those most relied on in the stages above mentioned, were foot baths of a strong infusion of capsicum, with mustard plasters to the stomach and abdomen. External heat applied by us with India rubber bags, filled with hot water, with varied combinations of opium, submur-hyd, or acetate of lead, injections compo-

sed of solutions of tannin or acetate of lead, combined with tincture of opium, were generally sufficient to check the disease at these periods.

When it had passed to partial collapse, dry friction of the extremities was directed after the capsicum bath. Subsequently an ointment, composed of ung. hyd. two parts, camphor and capsicum, each one part, was thoroughly rubbed in the skin of the extremities, and along the whole length of the spine.

During the recent epidemic, as in those of 1832 and 1834, this ointment seemed to us to be a highly beneficial application from the friction produced in its employment, as well as by its derivative effect, and the absorption that may have taken place of its ingredients. In conjunction with the use of this ointment, some of the remedial agents used in the previous stages, were continued in this stage. Musk and camphor were used at almost every stage of the disease. During the stage of complete collapse, external treatment was mostly relied on, and internal medication directed merely to mitigate the discharges from the stomach and bowels. When these persisted, we did not generally direct internal stimulants at this period, although they seemed so urgently called for. From the cases which we have seen in which brandy, wine and ammonia, &c., &c., were given, we do not believe the chances for rallying from collapse were increased; but we think that those who rally under the use of stimulants are liable to a still more malignant form of consecutive fever than those who react from remedies applied externally. When moderate reaction occurred, it required no special medication.

If consecutive fever supervened, the remedies employed were those applicable to congestive fevers. Blisters to the lower extremities—cupping or leeching the abdomen, chest or head, with such internal remedies as each particular case seemed to require.

\* To our medical assistants, Messrs. Salter, Hyslop and Wilson F. Bell, M. D., our thanks are due for the faithful manner in which they discharged their duties.

To our First Assistant, E. B. Stimson, M. D., we desire to return our thanks for the able and efficient manner in which he discharged his duties at all times, particularly for the ability and zeal exhibited when he had the entire charge of the hospital during our illness.

It is also due to the Sanatory Committee of the Board of Health, to state that the hospital was furnished with every thing requisite for the comfort and well-being of the patients, and that all our requisitions for things necessary to their welfare, were promptly supplied.

The following tables afford the aggregate number of admissions, deaths and discharges that have occurred at the Thirteenth street cholera hospital, from its organization on the 15th July, to its close on the 11th September, 1849, together with statistics regarding the sex, nativity, age and occupation of those admitted.

|                            |       |
|----------------------------|-------|
| Number of admissions,..... | 275   |
| FEMALES,.....              | 139   |
| MALES, .....               | 136   |
|                            | — 275 |



| NATIVITY.        |           | AGE.                  |           |
|------------------|-----------|-----------------------|-----------|
| Ireland,.....    | 161       | Between 1 and 10..... | 34        |
| England,.....    | 27        | “ 10 “ 20.....        | 29        |
| Germany,.....    | 22        | “ 20 “ 30.....        | 87        |
| Scotland,.....   | 4         | “ 30 “ 40.....        | 70        |
| France,.....     | 4         | “ 40 “ 50.....        | 34        |
| West Indies,...  | 3         | “ 50 “ 60.....        | 14        |
| Denmark,.....    | 1         | “ 60 “ 70.....        | 5         |
| United States,.. | 53        | “ 70 “ 80.....        | 2         |
|                  | <hr/> 275 |                       | <hr/> 275 |

## HABITS.

|                           |           |
|---------------------------|-----------|
| Habitual Drinkers,.....   | 111       |
| Occasional drinkers,..... | 59        |
| Temperate,.....           | 70        |
| Habits unknown,.....      | 35        |
|                           | <hr/> 275 |

## OCCUPATIONS.

|                     |    |                      |     |
|---------------------|----|----------------------|-----|
| Carpenters.....     | 5  | Shoe makers.....     | 6   |
| Seamstresses .....  | 18 | Farmers.....         | 7   |
| Engineers.....      | 4  | Grocers.....         | 2   |
| Brewers .....       | 1  | School teachers..... | 1   |
| Tailors .....       | 4  | House servants.....  | 47  |
| Wheelwrights.....   | 3  | Nurses .....         | 5   |
| Washerwomen.....    | 4  | Dock builders.....   | 2   |
| Segar makers.....   | 2  | Blacksmiths.....     | 5   |
| Laborers.....       | 62 | Tailors.....         | 6   |
| Stone cutters.....  | 11 | Paupers.....         | 8   |
| Straw pressers..... | 3  | Carmen.....          | 2   |
| Soap boilers.....   | 3  | Occupation unknown.  | 64  |
|                     |    | <hr/> Total.....     | 275 |

## STAGE OF DISEASE ON ADMISSION.

|                                         |       |
|-----------------------------------------|-------|
| Complete collapse.....                  | 126   |
| Partial Collapse.....                   | 93    |
| Premonitory symptoms and incipient..... | 20    |
| Reaction.....                           | 27    |
| In articulo mortis.....                 | 7     |
| Relapse.....                            | 2     |
|                                         | <hr/> |
|                                         | 275   |

## COLOR.

|              |       |
|--------------|-------|
| White.....   | 264   |
| Colored..... | 11    |
|              | <hr/> |
|              | 275   |

## RESULTS.

|                                       |       |
|---------------------------------------|-------|
| Discharged cured.....                 | 136   |
| Deaths from cholera.....              | 122   |
| Deaths from diseases supervening..... | 17    |
|                                       | <hr/> |
|                                       | 275   |

All of which is respectfully submitted.

OVID P. WELLS.

NO. VI.

STANTON STREET HOSPITAL.

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STANTON STREET HOSPITAL. }  
SEPT. 14, 1849. }

*To the Board of Health  
of the City of New York :*

GENTLEMEN :—In compliance with a resolution of your Board, I transmit a synopsis of the practice of the hospital under my charge, during the recent epidemic.

NUMBER OF PATIENTS ADMITTED.

|                                                                                                                          |     |
|--------------------------------------------------------------------------------------------------------------------------|-----|
| Suffering from diarrhœa.....                                                                                             | 40  |
| In partial collapse or first stage of cholera.....                                                                       | 40  |
| In stage of collapse.....                                                                                                | 120 |
| In consecutive stage.....                                                                                                | 6   |
| Suffering from dysentery.....                                                                                            | 14  |
| Suffering from pain in the abdomen and<br>cramps in the extremities, under the in-<br>fluence of spirituous liquors..... | 14  |
| Suffering from cholera infantum.....                                                                                     | 4   |
| <hr/>                                                                                                                    |     |
| TOTAL,.....                                                                                                              | 238 |

## DIED.

|                               |       |
|-------------------------------|-------|
| In the stage of collapse..... | 75    |
| “ Consecutive stage.....      | 23    |
| Of Delirium tremens.....      | 5     |
| “ Typhoid fever.....          | 3     |
| “ Bronchitis.....             | 2     |
| “ Dysentery.....              | 3     |
| “ Cholera infantum.....       | 1—112 |

## DISCHARGED CURED.

|                                                   |           |
|---------------------------------------------------|-----------|
| Of Diarrhœa.....                                  | 33        |
| “ Partial collapse or first stage of cholera..... | 25        |
| “ Collapse.....                                   | 18        |
| “ Consecutive stage.....                          | 23        |
| “ Cholera infantum.....                           | 3         |
| “ Dysentary.....                                  | 7         |
| “ the effects of intemperance.....                | 14        |
| “ Typhoid fever.....                              | 3—126     |
|                                                   | <hr/> 238 |

More minute and full statistical information is furnished by the following abstract from the hospital register.

Of the forty patients admitted with diarrhœa, there were

| DISCHARGED CURED.             | DIED.                   |
|-------------------------------|-------------------------|
| Of Diarrhœa,.....33           | Of Typhoid Fever,.....2 |
| “ First stage of cholera,.. 1 | “ Delirium Tremens, ..1 |
| “ Stage of collapse,..... 1   | —                       |
| “ Typhoid fever,..... 2       | 3                       |
| <hr/> 37                      | <hr/>                   |

Rate of mortality,  $7\frac{1}{2}$  per cent.

Of the forty patients admitted in the first stage of cholera, there were

| DISCHARGED CURED.           | DIED.                      |
|-----------------------------|----------------------------|
| Of First stage,.....24      | In stage of collapse,... 4 |
| “ Stage of collapse,..... 1 | “ Consecutive stage,.. 4   |
| “ Consecutive stage,.... 2  | Of Typhoid fever,..... 1   |
| “ Typhoid fever,..... 1     | “ Delirium tremens,.. 3    |
| —<br>28                     | —<br>12                    |

Rate of mortality 30 per cent.

Of one hundred and twenty patients admitted in the stage of collapse of cholera, there were

| DISCHARGED CURED.            | DIED.                      |
|------------------------------|----------------------------|
| Of stage of collapse,.....16 | In stage of collapse,...68 |
| “ Consecutive stage,....17   | “ Consecutive stage,..16   |
| —                            | Of Typhoid fever,..... 2   |
| 33                           | “ Delirium tremens,.. 1    |
| —                            | —<br>87                    |

Rate of mortality,  $72\frac{1}{2}$  per cent.

Of six patients admitted in the consecutive stage of cholera, there were

| DISCHARGED CURED.           | DIED.                      |
|-----------------------------|----------------------------|
| Of consecutive stage,.... 4 | In consecutive stage,... 2 |

Rate of mortality,  $33\frac{1}{3}$  per cent.

Of fourteen patients admitted with dysentery, there were

| DISCHARGED CURED.    | DIED.                           |
|----------------------|---------------------------------|
| Of Dysentery,..... 7 | Of Dysentery,..... 3            |
|                      | In collapse stage of cholera, 3 |
|                      | “ consecutive stage “ 1         |
|                      | —<br>—                          |



|                                   |                  |           |
|-----------------------------------|------------------|-----------|
| Rate of mortality from Dysentery, | $21\frac{6}{14}$ | per cent. |
| “ “ “ Cholera,                    | $28\frac{8}{14}$ | “ “       |
|                                   | <hr/>            |           |
|                                   | 50               | per cent. |

Of fourteen patients suffering from the effects of Intemperance, all were discharged, cured.

Of four children admitted with Cholera infantum, there were

DISCHARGED CURED.

DIED.

Of Cholera infantum, . . . . 3      Of Cholera infantum, . 1

Rate of mortality 25 per cent.

---

OF THE PATIENTS WHO DIED IN COLLAPSE.

6 died within 1 hour of their admission.

|   |   |   |    |   |   |   |
|---|---|---|----|---|---|---|
| 2 | “ | “ | 2  | “ | “ | “ |
| 4 | “ | “ | 3  | “ | “ | “ |
| 4 | “ | “ | 4  | “ | “ | “ |
| 5 | “ | “ | 5  | “ | “ | “ |
| 6 | “ | “ | 6  | “ | “ | “ |
| 7 | “ | “ | 7  | “ | “ | “ |
| 2 | “ | “ | 8  | “ | “ | “ |
| 3 | “ | “ | 9  | “ | “ | “ |
| 2 | “ | “ | 10 | “ | “ | “ |
| 3 | “ | “ | 11 | “ | “ | “ |
| 4 | “ | “ | 12 | “ | “ | “ |
| 1 | “ | “ | 13 | “ | “ | “ |
| 1 | “ | “ | 15 | “ | “ | “ |
| 2 | “ | “ | 16 | “ | “ | “ |

1 died within 17 hours of their admission.

|   |   |   |    |   |   |   |
|---|---|---|----|---|---|---|
| 1 | " | " | 18 | " | " | " |
| 3 | " | " | 20 | " | " | " |
| 3 | " | " | 22 | " | " | " |
| 1 | " | " | 24 | " | " | " |
| 7 | " | " | 26 | " | " | " |
| 1 | " | " | 30 | " | " | " |
| 1 | " | " | 36 | " | " | " |

\*

From ninety-six patients the hour of attack was, it is believed correctly ascertained :

| 3 were attacked at 1 A. M. |   |   | 5 were attacked at 12 M. |   |         |
|----------------------------|---|---|--------------------------|---|---------|
| 9                          | " | " | 2                        | " | 1 P. M. |
| 11                         | " | " | 3                        | " | 2 "     |
| 2                          | " | " | 4                        | " | 3 "     |
| 3                          | " | " | 5                        | " | 4 "     |
| 3                          | " | " | 6                        | " | 5 "     |
| 10                         | " | " | 7                        | " | 9 "     |
| 5                          | " | " | 8                        | " | 10 "    |
| 2                          | " | " | 9                        | " | 11 "    |
| 6                          | " | " | 10                       | " | 12 "    |
| 4                          | " | " | 11                       | " |         |

Of the two hundred and thirty-eight cases admitted, there were,

MALES,.....123      FEMALES,.....115

#### NATIVITY.

United States,..... 59  
Ireland, .....101  
Other countries,..... 78

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238

In continuation of the report, allusion will only be made to such facts as were observed during the progress of the disease, and believed worthy of record, without attempting a general description of cholera and its treatment.

It would appear superfluous to allude to the symptoms of cholera at this time, so well are they known to every medical man at all familiar with the disease. Yet as the discharges are generally understood to be white or very light colored, it may be proper to observe, that in very many cases they were of dark amber or mahogany color. Such cases we thought more likely to terminate fatally than those having the true rice-water discharges. Another peculiarity of the dejections was observed in some cases admitted during the first stage; the consistence was like yeast, and the color resembling ashes and water. Cramps in the extremities were of very general occurrence.

In the treatment from the commencement of diarrhœa to the stage of collapse, our remedies were selected with the object of arresting the discharges as speedily as possible. With this view, opium, with some aromatic and stimulant, was first given, and mustard applied to the epigastrium, with dry heat to the extremities; after which, if unsuccessful, calomel, combined with opium or acetas plumb, was given, and frequently repeated if necessary. Injections of acetas plumb,  $\frac{1}{2}$  dr. in water 8 oz., were also used with some success.

Cold to the epigastrium we often found relieved vomiting; internal remedies appeared ineffectual in allaying this symptom. Stimulants were not generally found admissable during the stage of collapse, except in very small quantities.

In the consecutive fever, stimulants were not borne well, and the only reliance were counter irritants to the neck and extremities, with cold to head, and supporting the patient with arrow root, beef-tea, &c. ; yet, in some cases, diuretics were used with apparent advantage. Here the mur. tinct. ferri was alone found advantageous, and not in the stage of collapse, as has been recently recommended.

The ol. terebinthinæ and chloroform, with brandy, highly recommended in the Philadelphia Medical Examiner, as being very effectual in the stage of collapse, was tried without any benefit. The cramps in the stomach we found frequently relieved by chloroform, internally, and very often by applying it externally to the part effected. Bandages to the extremities relieved the cramps in some cases.

Bleeding from the arm was resorted to in two cases, with marked and decided benefit.

Post mortem appearances were very similar in all the cases examined—lungs congested, bronchial tubes containing mucus ; heart healthy, both ventricles filled with dark blood ; liver engorged with dark blood ; gall bladder full, and emptied with difficulty ; stomach and small intestines highly injected, and thickened from effusion between the coats, presenting, when pressed between the fingers, a doughy feel ; large intestines healthy ; peritoneal coat of the small intestines red, dry, and adhesive, when taken hold of ; kidneys congested ; bladder very much contracted and empty.

Dr. BEZOIN R. MASTERS, late Assistant Physician of Bellevue Hospital, whose aid I was fortunate in securing,

is entitled to full commendation ; unassisted by any person but myself, his duties, although constant and arduous, were at all times promptly and cheerfully performed, with decided skill and ability.

To the Sanatory Committee I desire especially to acknowledge my great obligations for the promptness and liberality with which all my requisitions were supplied.

With many thanks for the kindness and consideration which I have, during the brief period of my recent engagement, received from your Board,

I am yours, most respectfully,

ISAAC GREENE, M. D.